







Supplemental Table 1-2. Genes down-regulated in cold deacclimation process identified by 7K RAFL cDNA microarray analysis

| FuncGene                             | Ratio(cold acclimation/Unstressed) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Ratio(cold deacclimation after 24hr cold acclimation/ 24hr cold acclimation) |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      | Ratio(cold deacclimation after 168hr cold acclimation/ 168hr cold acclimation) |      |      |      |           |                             |  |   |          |             |             |             |             |      |     |      | Accession Genbank | EC | Accession No. (5 <sup>1</sup> ) | Accession No. (3 <sup>1</sup> ) | Accession Agilent 22k <sup>1</sup> |           |              |  |  |      |  |  |  |
|--------------------------------------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|--|------|------|------|-----------|-----------------------------|--|---|----------|-------------|-------------|-------------|-------------|------|-----|------|-------------------|----|---------------------------------|---------------------------------|------------------------------------|-----------|--------------|--|--|------|--|--|--|
|                                      | 1hr                                |       |       |       | 2hr   |       |       |       | 5hr   |       |       |       | 10hr  |       |       |       | 24hr   |       |      |      | 48hr |      |      |      | 96hr |      |      |      | 144hr |      |      |      | 168hr  |      |      |      | 1hr       |                             |  |   | 2hr      |             |             |             | 5hr         |      |     |      |                   |    |                                 |                                 |                                    | 10hr      |              |  |  | 24hr |  |  |  |
|                                      | Av.                                | Std.  | Av.   | Std.  | Av.   | Std.  | Av.   | Std.  | Av.   | Std.  | Av.   | Std.  | Av.   | Std.  | Av.   | Std.  | Av.  | Std.  | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.   | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.       | Std.                        | Av.  | Std.  | Av.      | Std.        | Av.         | Std.        | Av.         | Std. | Av. | Std. |                   |    |                                 |                                 |                                    | AGI codes | Annotations) |  |  |      |  |  |  |
| <b>Regulatory proteins</b>           |                                    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |  |      |      |      |           |                             |  |   |          |             |             |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| <b>F-box protein</b>                 |                                    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |  |      |      |      |           |                             |  |   |          |             |             |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-08-B11                         | 0.881                              | 0.517 | 0.997 | 0.225 | 0.983 | 0.106 | 1.86  | 0.231 | 5.649 | 0.803 | 2.163 | 0.944 | 0.969 | 0.05  | 1.267 | 0.011 | 1  | 0.045 | 0.61 | 0.1  | 0.37 | 0.07 | 0.28 | 0.02 | 0.27 | 0.05 | 0.27 | 0.03 | 0.86  | 0.17 | 0.72 | 0.2  | 0.83   | 0.17 | 0.82 | 0.05 | 0.87      | 0.36                        | At3g61060  | unknown protein   | AY034967 |             | AV783283    | AT3G61060.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF07-18-B18                         | 0.759                              | 0.108 | 1.413 | 0.502 | 5.517 | 1.601 | 0.47  | 2.652 | 1.756 | 0.257 | 1.486 | 0.057 | 1.684 | 0.017 | 1.674 | 0.011 | 0.028  | 0.3   | 0.03 | 0.49 | 0.14 | 0.38 | 0.02 | 0.49 | 0.17 | 0.53 | 0.31 | 0.57 | 0.17  | 0.63 | 0.07 | 0.35 | 0.12   | 0.61 | 0.16 | 0.53 | 0.16      | At1g68050                   | unknown protein                                  | AY064999  | AV825966 | AV793099    | AT1G68050.1 |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| <b>Nucleic Acids-related protein</b> |                                    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |  |      |      |      |           |                             |  |   |          |             |             |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF04-12-N15                         | 0.687                              | 0.371 | 0.999 | 0.177 | 1.13  | 1.098 | 2.246 | 0.983 | 3.008 | 7.597 | 2.339 | 0.23  | 1.55  | 0.282 | 2.093 | 1.749 | 0.763  | 0.33  | 0.08 | 0.24 | 0.12 | 0.18 | 0.05 | 0.16 | 0.04 | 0.19 | 0.06 | 0.5  | 0.14  | 0.31 | 0.07 | 0.33 | 0.25   | 0.23 | 0.02 | 0.41 | 0.01      | At3g55580                   | regulator of chromosome condensation-like protei |   |          | AV821512    | AV781998    | AT3G55580.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| <b>Protein Kinase</b>                |                                    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |  |      |      |      |           |                             |  |   |          |             |             |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-08-F01                         | 0.795                              | 0.263 | 1.126 | 0.188 | 2.062 | 0.239 | 2.653 | 0.174 | 2.626 | 0.029 | 2.583 | 0.811 | 1.76  | 0.246 | 1.736 | 0.045 | 1.793  | 0.048 | 0.77 | 0.21 | 0.45 | 0.03 | 0.32 | 0.02 | 0.37 | 0.07 | 0.37 | 0.06 | 0.66  | 0.03 | 0.48 | 0.05 | 0.58   | 0.01 | 0.71 | 0.18 | 0.76      | 0.05                        | At3g53570  | protein kinase (AME2/AFC1)                              | AY034936 | 2.7.1.-     | AV825253    | AV783311    | AT3G53570.1 |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-16-D12                         | 1.115                              | 0.801 | 1.428 | 0.227 | 0.956 | 0.221 | 0.005 | 0.411 | 2.53  | 1.154 | 2.586 | 0.989 | 1.362 | 1.803 | 0.238 | 1.349 | 0.316  | 0.47  | 0.07 | 0.53 | 0.19 | 0.32 | 0.01 | 0.38 | 0.08 | 0.46 | 0    | 0.79 | 0.18  | 0.54 | 0.02 | 0.5  | 0.02   | 0.54 | 0.02 | 0.08 | 0.08      | At1g78290                   | protein kinase 1 like protein                    | AF411782  | AV823184 | AV783872    | AT1G78290.1 |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-14-A21                         | 0.923                              | 0.171 | 1.672 | 0.954 | 0.706 | 0.932 | 5.048 | 1.559 | 1.126 | 2.343 | 0.668 | 1.2   | 1.339 | 0.075 | 1.44  | 0.076 | 0.071  | 0.47  | 0.27 | 0.23 | 0.05 | 0.24 | 0.09 | 0.31 | 0.09 | 0.22 | 0.02 | 0.74 | 0.1   | 1.18 | 0.4  | 1.76 | 1.48   | 0.24 | 1.03 | 0.35 | At3g59350 | protein kinase-like protein | AY054639   | AV822985  | AV783872 | AT3G59350.1 |             |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF11-11-C18                         | 0.668                              | 0.3   | 0.975 | 0.163 | 1.862 | 0.725 | 4.051 | 1.361 | 3.195 | 0.523 | 2.907 | 0.387 | 2.684 | 0.339 | 2.521 | 0.637 | 2.792  | 0.597 | 0.56 | 0.3  | 0.52 | 0.01 | 0.3  | 0.18 | 0.26 | 0.07 | 0.39 | 0.03 | 0.44  | 0.06 | 0.34 | 0.07 | 0.39   | 0.16 | 0.47 | 0.14 | 0.37      | 0.14                        | At5g10290  | serine/threonine kinase-like protei                     | AY093029 | AV823212    | AV820577    | AT5G10290.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-16-K11                         | 0.615                              | 0.389 | 0.861 | 1.123 | 1.261 | 0.177 | 1.852 | 0.622 | 4.469 | 1.123 | 1.261 | 0.177 | 1.852 | 0.622 | 4.469 | 1.123 | 1.261  | 0.177 | 0.28 | 0.04 | 0.31 | 0.08 | 0.23 | 0.1  | 0.24 | 0.04 | 0.31 | 0.13 | 0.23  | 0.02 | 0.22 | 0.07 | 0.23   | 0.16 | 0.27 | 0.05 | 0.29      | 0.04                        | At5g25110  | serine/threonine protein kinase-like protei             | AY050360 | AV821842    | AV782437    | AT5G25110.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF04-17-G24                         | 1.019                              | 0.594 | 1.598 | 0.343 | 1.654 | 0.358 | 1.893 | 0.281 | 2.835 | 0.508 | 1.245 | 0.306 | 0.887 | 0.159 | 0.91  | 0.05  | 1.007  | 0.025 | 0.46 | 0.07 | 0.29 | 0.03 | 0.17 | 0    | 0.17 | 0.06 | 0.23 | 0.1  | 0.43  | 0.05 | 0.44 | 0.04 | 0.11   | 0.46 | 0.1  | 0.48 | 0.07      | At3g23000                   | SNF1 related protein kinase (ATSRPK1)            | AY054686  | AV821869 | AV782437    | AT3G23000.1 |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| <b>Protein phosphatase</b>           |                                    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |  |      |      |      |           |                             |  |   |          |             |             |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-14-M09                         | 1.146                              | 0.874 | 1.509 | 0.077 | 1.912 | 0.004 | 2.771 | 0.943 | 4.627 | 2.261 | 2.07  | 0.13  | 1.672 | 0.372 | 1.45  | 0.09  | 1.595  | 0.101 | 0.39 | 0.06 | 0.17 | 0.01 | 0.18 | 0.08 | 0.17 | 0.03 | 0.26 | 0.16 | 0.49  | 0.07 | 0.41 | 0.04 | 0.58   | 0.2  | 0.51 | 0.1  | 0.6       | 0.11                        | At3g16800  | protein phosphatase, putativ                            |          |             | AV823057    | AV783955    | AT3G16800.1 |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| <b>Signaling</b>                     |                                    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |  |      |      |      |           |                             |  |   |          |             |             |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF04-13-K15                         | 0.663                              | 0.156 | 0.83  | 0.18  | 0.717 | 0.014 | 1.236 | 0.314 | 3.155 | 0.467 | 2.399 | 0.624 | 1.673 | 0.517 | 1.588 | 0.389 | 1.484  | 0.074 | 0.68 | 0.14 | 0.69 | 0.01 | 0.37 | 0.02 | 0.28 | 0.02 | 0.29 | 0.1  | 0.7   | 0.07 | 0.64 | 0.08 | 0.55   | 0.19 | 0.5  | 0.04 | 0.51      | 0.14                        | At1g43890  | GTP-binding protein, putativ                            | AF370263 | AV821567    | AV781824    | AT1G43890.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF04-09-J20                         | 1.012                              | 0.915 | 2.846 | 0.759 | 3.127 | 0.643 | 1.98  | 0.518 | 3.66  | 0.738 | 2.373 | 0.479 | 1.56  | 0.229 | 1.675 | 0.426 | 1.931  | 0.907 | 0.43 | 0.08 | 0.31 | 0.09 | 0.29 | 0.18 | 0.29 | 0    | 0.3  | 0.07 | 0.45  | 0.06 | 0.28 | 0    | 0.31   | 0.14 | 0.36 | 0.04 | 0.38      | 0                           | At5g49480  | NaCl-inducible Ca2+-binding protein-like; calmodulin-li | AF378884 | AV821391    | AV781824    | AT5G49480.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| <b>Transcription factor</b>          |                                    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |  |      |      |      |           |                             |  |   |          |             |             |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF08-11-H19                         | 0.732                              | 0.353 | 1.056 | 0.24  | 1.71  | 0.237 | 2.375 | 0.385 | 2.934 | 0.011 | 1.593 | 0.207 | 1.606 | 0.031 | 1.864 | 0.629 | 2.145  | 0.339 | 0.48 | 0.15 | 0.3  | 0    | 0.25 | 0.23 | 0.28 | 0.05 | 0.42 | 0.14 | 0.55  | 0.09 | 0.29 | 0.11 | 0.29   | 0.43 | 0.02 | 0.34 | 0.18      | At2g28550                   | AP2 transcription factor like protei             | AY050815  | AV794094 | AT2G28550.1 |             |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-20-N17                         | 1.476                              | 1.647 | 0.964 | 0.62  | 2.1   | 1.146 | 1.659 | 0.243 | 2.34  | 1.314 | 1.659 | 0.243 | 2.34  | 1.314 | 1.659 | 0.243 | 2.34   | 1.314 | 0.46 | 0.1  | 0.37 | 0.02 | 0.31 | 0.1  | 0.29 | 0.01 | 0.46 | 0.16 | 0.62  | 0.02 | 0.37 | 0.08 | 0.36   | 0.13 | 0.4  | 0.11 | 0.64      | 0.07                        | At2g46830  | CCA1  | AY050961 | AV823536    | AV784525    | AT2G46830.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF04-17-F21                         | 2.276                              | 4.169 | 7.31  | 3.554 | 4.398 | 1.488 | 1.814 | 3.26  | 4.571 | 0.613 | 3.024 | 1.232 | 1.848 | 0.58  | 2.46  | 2.095 | 2.6  | 0.984 | 0.64 | 0.32 | 0.57 | 0.07 | 0.34 | 0.18 | 0.27 | 0.16 | 0.42 | 0.07 | 0.75  | 0.03 | 0.54 | 0.04 | 0.37   | 0.1  | 0.29 | 0.05 | 0.64      | 0.16                        | At1g91060  | DNA-binding protein, putativ                            | AF370787 | AV821864    | AV782430    | AT1G91060.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| DREB1A                               | 2.067                              | 2.27  | 9.83  | 3.573 | 5.611 | 1.306 | 2.421 | 0.353 | 3.175 | 0.37  | 0.982 | 0.04  | 0.96  | 0.454 | 1.044 | 1.337 | 0.997  | 0.42  | 0.42 | 0.1  | 0.39 | 0.07 | 0.32 | 0.11 | 0.37 | 0.15 | 0.27 | 0.03 | 0.67  | 0.08 | 0.89 | 0.23 | 0.87   | 0.56 | 0.12 | 0.69 | 0.12      | At4g25481                   | DREB1A   | AB007787  | AV823507 | AV794489    | AT4G25480.1 |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| DREB2A                               | 0.915                              | 0.248 | 1.548 | 1.013 | 3.921 | 1.789 | 3.133 | 2.2   | 5.63  | 0.956 | 2.36  | 0.804 | 1.396 | 1.21  | 1.548 | 0.214 | 1.483  | 0.241 | 0.62 | 0.03 | 0.43 | 0.14 | 0.3  | 0.29 | 0.31 | 0.23 | 0.38 | 0.25 | 1.2   | 0.2  | 0.73 | 0.06 | 0.84   | 0.63 | 0.11 | 0.76 | 0.2       | At5g05410                   | DREB2A (bjaBAA33794.1)                           | AB007790  | AV823507 | AV782927    | AT5G05410.1 |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-05-A21                         | 0.518                              | 0.211 | 0.84  | 0.13  | 1.107 | 0.224 | 2.067 | 0.418 | 4.34  | 2.005 | 2.374 | 0.708 | 1.633 | 0.014 | 1.531 | 0.718 | 1.362  | 0.064 | 0.56 | 0.24 | 0.65 | 0.26 | 0.18 | 0.03 | 0.23 | 0.04 | 0.21 | 0.01 | 0.74  | 0.04 | 0.57 | 0.11 | 0.48   | 0.31 | 0.06 | 0.45 | 0.05      | At2g45660                   | MADS-box protein (AGL20)                         | AF385731  | AV822335 | AV783069    | AT2G45660.1 |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF09-12-G02                         | 0.516                              | 0.095 | 0.769 | 0.121 | 2.601 | 0.239 | 3.333 | 5.825 | 3.116 | 3.225 | 1.596 | 3.024 | 1.341 | 3.413 | 1.92  | 4.451 | 1.619  | 0.51  | 0.13 | 0.27 | 0.01 | 0.31 | 0.19 | 0.27 | 0.02 | 0.36 | 0.04 | 0.55 | 0.08  | 0.37 | 0.06 | 0.42 | 0.02   | 0.63 | 0.07 | 0.45 | 0.01      | At5g61380                   | pseudo-response regulator                        | AY094393  | AV822701 | AV797504    | AT5G61380.1 |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-03-H05                         | 1.053                              | 0.728 | 2.279 | 0.601 | 1.685 | 0.169 | 1.214 | 0.124 | 2.515 | 0.771 | 1.373 | 0.217 | 1.165 | 0.12  | 1.025 | 0.516 | 1.053  | 0.047 | 0.31 | 0.03 | 0.26 | 0.05 | 0.29 | 0.08 | 0.36 | 0.12 | 0.28 | 0.03 | 0.48  | 0.14 | 0.55 | 0.12 | 0.72   | 0    | 0.55 | 0.1  | 0.63      | 0.01                        | At4g27310  | putative protei   | AY070721 | AV822227    | AV782927    | AT4G27310.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-19-O11                         | 0.739                              | 0.741 | 1.655 | 0.641 | 2.614 | 0.563 | 2.568 | 0.391 | 3.715 | 0.298 | 1.621 | 0.149 | 1.37  | 0.519 | 1.695 | 0.233 | 1.765  | 0.165 | 0.28 | 0.04 | 0.19 | 0.04 | 0.2  | 0.07 | 0.2  | 0.01 | 0.26 | 0.14 | 0.35  | 0.08 | 0.28 | 0.01 | 0.3  | 0.1  | 0.32 | 0.02 | 0.33      | 0.06                        | At4g29190  | unknown protei  | AY045970 | AV823507    | AV794489    | AT4G29190.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF04-09-B07                         | 1.725                              | 2.084 | 4.191 | 1.741 | 3.118 | 1.277 | 1.410 | 0.035 | 4.497 | 4.847 | 2.511 | 0.742 | 2.042 | 0.008 | 2.481 | 1.47  | 2.242  | 0.828 | 0.31 | 0.08 | 0.28 | 0.19 | 0.28 | 0.15 | 0.29 | 0.01 | 0.34 | 0.03 | 0.37  | 0.11 | 0.34 | 0.05 | 0.2  | 0.25 | 0.39 | 0.04 | 0.52      | 0.1                         | At5g17300  | unknown protei  | AF378860 | AV821779    | AV781779    | AT5G17300.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF04-15-E14                         | 0.429                              | 0.103 | 0.464 | 0.091 | 0.579 | 0.146 | 1.625 | 0.474 | 1.946 | 0.297 | 2.063 | 0.035 | 1.234 | 0.635 | 1.419 | 0.301 | 1.006  | 0.237 | 0.61 | 0.02 | 0.26 | 0.02 | 0.34 | 0.03 | 0.17 | 0.16 | 0.28 | 0.11 | 0.63  | 0.16 | 0.38 | 0    | 0.37   | 0.08 | 0.48 | 0.02 | 0.54      | 0.08                        | At1g20685  | unknown protei  | AF370248 | AV821687    | AV782214    | AT1G20685.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-19-M20                         | 1.2                                | 1.641 | 3.429 | 0.679 | 3.297 | 1.661 | 2.438 | 1.314 | 3.529 | 0.668 | 3.873 | 1.044 | 2.8   | 0.204 | 2.611 | 1.092 | 2.556  | 0.741 | 0.24 | 0.02 | 0.21 | 0.11 | 0.2  | 0.09 | 0.19 | 0.04 | 0.21 | 0.07 | 0.31  | 0.07 | 0.23 | 0.02 | 0.21   | 0.17 | 0.22 | 0.01 | 0.29      | 0.07                        | At2g31380  | B-box zinc finger protein (STH)                         | BT000798 | AV823496    | AV784474    | AT2G31380.1 |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF05-07-H20                         | 1.197                              | 1.531 | 3.338 | 0.344 | 0.965 | 0.212 | 2.297 | 0.688 | 3.03  | 0.091 | 1.376 | 0.914 | 2.337 | 1.127 | 2.673 | 1.586 | 2.228  | 0.695 | 0.32 | 0.03 | 0.27 | 0.09 | 0.26 | 0.14 | 0.25 | 0.06 | 0.29 | 0.01 | 0.44  | 0.09 | 0.31 | 0.06 | 0.26   | 0.35 | 0.01 | 0.42 | 0.02      | At2g31380                   | B-box zinc finger protein (STH)                  | AF370311  | AV822444 | AV783213    | AT2G31380.1 |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |
| RAF09-13-C19                         | 0.787                              | 0.302 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |  |      |      |      |           |                             |  |   |          |             |             |             |             |      |     |      |                   |    |                                 |                                 |                                    |           |              |  |  |      |  |  |  |

| Lipid transfer protein                |       | RAF106-12-D06 |       | 0.662 0.395 1.098 0.085 1.223 0.347 2.131 0.398 2.766 0.067 5.788 0.335 6.268 0.751 5.534 0.114 5.146 0.042 |       | 0.78 0.5 1.28 0.11 0.77 0.16 0.55 0.16 0.48 0.16 0.77 0.06 0.6 0.06 0.39 0.04 0.38 0.14 0.3 0.02 At3g51600 |       | non-specific lipid transfer protein |       | AY058111 |       | AV824021 AV785141 AT3G51600.1 |       |       |       |       |       |       |       |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |   |   |               |             |             |             |
|---------------------------------------|-------|---------------|-------|---|-------|--|-------|-------------------------------------|-------|----------|-------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|---|---|---|---|---------------|-------------|-------------|-------------|
| <b>Membrane protein</b>               |       |               |       |   |       |  |       |                                     |       |          |       |                               |       |       |       |       |       |       |       |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |   |   |               |             |             |             |
| RAF106-09-G28                         | 0.644 | 0.197         | 1.003 | 0.169   | 1.918 | 0.758  | 2.655 | 0.34                                | 7.077 | 1.416    | 3.666 | 2.419                         | 1.477 | 0.043 | 1.66  | 0.28  | 1.652 | 0.246 | 0.67  | 0.06  | 0.42 | 0.01 | 0.14 | 0.03 | 0.12 | 0.02 | 0.14 | 0.06 | 0.62 | 0.11 | 0.46 | 0.17 | 0.41 | 0.09 | 0.47 | 0.15 | 0.38      | 0.01                                      | At5g58070                                 | outer membrane lipoprotein - like                                     | AY062789  | AV823843      | AV784908    | AT5G58070.1 |             |
| RAF106-16-B22                         | 0.316 | 0.245         | 0.561 | 0.083   | 1.423 | 0.455  | 4.455 | 0.249                               | 8.238 | 3.85     | 6.41  | 1.728                         | 3.49  | 0.41  | 3.255 | 0.071 | 3.459 | 1.237 | 0.41  | 0.38  | 0.58 | 0.04 | 0.24 | 0.09 | 0.13 | 0.01 | 0.1  | 0.02 | 0.64 | 0.06 | 0.28 | 0.01 | 0.13 | 0.02 | 0.16 | 0.01 | 0.17      | 0.03                                      | At2g15970                                 | similar to cold acclimation protein WCOR413 [Triticum aestivum]       | AY083767  | AV824218      | AV785416    | AT2G15970.1 |             |
| RAF106-12-112                         | 0.701 | 0.611         | 1.134 | 0.122   | 0.507 | 0.283  | 0.908 | 0.195                               | 2.064 | 1.895    | 0.354 | 1.93                          | 0.495 | 2.557 | 1.448 | 0.689 | 0.43  | 0.38  | 0.15  | 0.8   | 0.05 | 0.67 | 0.06 | 0.51 | 0.02 | 0.02 | 0.02 | 0.04 | 0.01 | 0.11 | 0.02 | 0.05 | 0.06 | 0.29 | 0.19 | 0.29 | 0.05      | At5G09530                                 | perixin - like protein                    | AY054648  | AV822862  | AV783724      | AT5G09530.1 |             |             |
| RAF11-106-111                         | 0.683 | 0.221         | 1.286 | 0.289   | 5.177 | 1.89   | 9.465 | 0.767                               | 10.93 | 2.451    | 6.067 | 0.72                          | 3.205 | 1.261 | 2.989 | 0.929 | 2.467 | 0.343 | 0.71  | 0.3   | 0.91 | 0.06 | 0.42 | 0.03 | 0.29 | 0.1  | 0.28 | 0.1  | 0.74 | 0.13 | 0.64 | 0.02 | 0.67 | 0.05 | 0.58 | 0.13 | 0.55      | 0   | At1g30360                                 | ERD4 protein [ERD4]   | AY042812  |               |             |             |             |
| RAF104-12-K17                         | 0.631 | 0.273         | 1.057 | 0.304   | 3.441 | 1.154  | 5.264 | 0.883                               | 7.494 | 1.008    | 3.957 | 1.113                         | 1.971 | 0.536 | 2.389 | 0.934 | 1.755 | 0.358 | 0.72  | 0.31  | 0.68 | 0.01 | 0.34 | 0.02 | 0.18 | 0.02 | 0.15 | 0.04 | 0.63 | 0.07 | 0.55 | 0.1  | 0.58 | 0.06 | 0.45 | 0.04 | 0.46      | 0.07                                      | At1g30360                                 | ERD4 protein [ERD4]   | AY035092  | AV821504      | AV781986    | AT1G30360.1 |             |
| ERD4                                  | 0.808 | 0.318         | 1.126 | 0.137   | 3.549 | 1.157  | 5.743 | 0.702                               | 7.68  | 0.966    | 4.392 | 0.57                          | 2     | 0.226 | 2.155 | 0.492 | 1.849 | 0.39  | 0.65  | 0.16  | 0.65 | 0.12 | 0.42 | 0.01 | 0.23 | 0.03 | 0.18 | 0.07 | 0.72 | 0.13 | 0.65 | 0.13 | 0.69 | 0.05 | 0.56 | 0.09 | 0.57      | 0.01                                      | At1g30360                                 | ERD4 protein [ERD4]   | AB039928  |               |             |             |             |
| <b>Osmoprotectant-related protein</b> |       |               |       |   |       |  |       |                                     |       |          |       |                               |       |       |       |       |       |       |       |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |   |   |               |             |             |             |
| RAF106-15-M09                         | 0.783 | 0.144         | 1.291 | 0.371   | 1.633 | 0.528  | 2.098 | 1.47                                | 9.235 | 1.232    | 6.841 | 3.889                         | 1.806 | 0.139 | 1.906 | 0.054 | 1.87  | 0.5   | 0.59  | 0.53  | 0.91 | 0.02 | 0.35 | 0.08 | 0.13 | 0.01 | 0.13 | 0    | 0.74 | 0.11 | 0.36 | 0.03 | 0.22 | 0.04 | 0.29 | 0.05 | 0.3       | 0.09                                      | At3g55610                                 | delta-1-pyrroline-5-carboxylate synthetase                            | AY091766  | 2.7.2.11 1.2. | AV823133    | AV784054    | AT3G55610.1 |
| RAF106-10-P15                         | 0.938 | 0.405         | 1.034 | 0.249   | 3.381 | 0.801  | 2.999 | 0.538                               | 0.321 | 2.76     | 1.028 | 1.701                         | 0.216 | 2.012 | 1.143 | 1.468 | 0.189 | 0.5   | 0.56  | 0.24  | 0.02 | 0.03 | 0.19 | 0.02 | 0.17 | 0.19 | 0.31 | 0.22 | 0.84 | 0.1  | 0.71 | 0.04 | 0.52 | 0.05 | 0.68 | 0.08 | 0.67      | 0.07                                      | At5G40390                                 | raffinose synthase-like protein                                       | AY062781  | AV823951      | AV785047    | AT5G40390.1 |             |
| AG1a53                                | 0.666 | 0.564         | 1.023 | 0.198   | 4.027 | 1.22   | 12.68 | 0.418                               | 32.78 | 6.653    | 26.36 | 9.251                         | 9.298 | 2.507 | 12.18 | 0.228 | 14.86 | 7.003 | 0.22  | 0.06  | 0.15 | 0.01 | 0.1  | 0.12 | 0.07 | 0.03 | 0.09 | 0.1  | 0.16 | 0.03 | 0.11 | 0.07 | 0.04 | 0.04 | 0.08 | ###  | 0.17      | 0.12                                      | At1g09350                                 | putative galactinol synthase  | AB062850  |               |             |             |             |
| RAF104-16-K22                         | 0.385 | 0.524         | 0.956 | 0.271   | 2.793 | 0.096  | 11.29 | 4.279                               | 38.03 | 24.63    | 36.08 | 18.2                          | 4.693 | 18.02 | 1.818 | 20    | 10.1  | 1.5   | 0.18  | 0.11  | 0.04 | 0.05 | 0.05 | 0.03 | 0.02 | 0.04 | 0.01 | 0.11 | 0.02 | 0.02 | 0.05 | 0    | 0.07 | 0.04 | 0.04 | ###  | 0.01      | 0.07                                      | 0   | At1g09350   | putative galactinol synthase  | AF370546      | AV821807    | AV782355    | AT1G09350.1 |
| RAF106-13-015                         | 0.581 | 0.514         | 1.056 | 0.436   | 1.813 | 0.867  | 1.816 | 0.355                               | 3.917 | 0.364    | 4.765 | 3.54                          | 3.429 | 8.005 | 4.288 | 0.109 | 3.488 | 0.675 | 0.68  | 0.48  | 0.68 | 0.08 | 0.35 | 0.23 | 0.23 | 0    | 0.32 | 0.02 | 0.62 | 0.11 | 0.37 | 0.03 | 0.19 | 0.02 | 0.27 | 0.11 | 0.34      | 0.01                                      | At2g47180                                 | putative galactinol synthase  | AY056139  | AV784681      | AT2G47180.1 |             |             |
| AG1a51                                | 0.627 | 0.377         | 1.032 | 0.197   | 1.626 | 0.888  | 1.851 | 1.114                               | 2.841 | 1.614    | 1.242 | 3.145                         | 0.817 | 4.177 | 3.192 | 3.028 | 0.995 | 0.82  | 0.38  | 0.64  | 0.03 | 0.36 | 0.26 | 0.27 | 0.12 | 0.39 | 0.13 | 0.61 | 0.22 | 0.51 | 0.19 | 0.31 | 0.12 | 0.35 | 0.02 | 0.4  | 0.15      | At2g47180                                 | putative galactinol synthase              | AB062848  |   |               |             |             |             |
| <b>Photosynthesis-related protein</b> |       |               |       |   |       |  |       |                                     |       |          |       |                               |       |       |       |       |       |       |       |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |   |   |               |             |             |             |
| RAF106-14-O21                         | 0.918 | 0.793         | 1.187 | 0.248   | 1.197 | 0.903  | 0.78  | 0.89                                | 0.65  | 0.02     | 0.659 | 0.048                         | 1.512 | 0.159 | 1.422 | 0.616 | 1.302 | 0.161 | 0.58  | 0.17  | 0.89 | 0.18 | 0.73 | 0.06 | 0.58 | 0.05 | 0.64 | 0.24 | 0.92 | 0.32 | 0.69 | 0.03 | 0.54 | 0.06 | 0.37 | 0.07 | 0.32      | 0.14                                      | At5g13630                                 | putative chloroplast Mg-protoporphyrin IX chelatase(CHL)              | 6.6.1.1   | AV823067      | AV783972    | AT5G13630.1 |             |
| RAF104-15-J15                         | 1.801 | 0.168         | 1.265 | 0.277   | 1.177 | 0.111  | 1.445 | 0.014                               | 0.745 | 0.010    | 0.589 | 0.094                         | 0.421 | ###   | 0.342 | 0.126 | 0.263 | 0.05  | 0.77  | 0.35  | 0.87 | 0.1  | 0.46 | 0    | 0.4  | 0.02 | 0.3  | 0.12 | 1.38 | 0.5  | 1.44 | 0.4  | 2.66 | 0.51 | 1.35 | 0.11 | 1.25      | 0.33                                      | At5g38410                                 | ribulose biphosphate carboxylase small chain 2b precursor (RBT000721) | 4.1.1.39  | AV821712      | AV782245    | AT5G38410.1 |             |
| RAF106-10-C15                         | 1.805 | 0.253         | 1.313 | 0.221   | 0.449 | 1.17   | 0.15  | 1.046                               | 0.092 | 0.789    | 0.025 | 0.513                         | 0.1   | 0.419 | 0.052 | 0.342 | 0.124 | 0.26  | 0.04  | 0.83  | 0.02 | 0.81 | 0.13 | 0.06 | 0.09 | 0.46 | 0.03 | 0.31 | 0.09 | 1.35 | 0.5  | 1.87 | 0.51 | 3.45 | 0.62 | 1.36 | 0.14      | 1.36                                      | 0.19                                      | At5g38420   | ribulose biphosphate carboxylase small chain 2b precursor (RUBiSC0 sma) | 4.1.1.39      | AV823947    | AV785043    | AT5G38420.1 |
| RAF106-12-019                         | 1.453 | 0.253         | 1.313 | 0.221   | 0.449 | 1.17   | 0.15  | 1.046                               | 0.092 | 0.789    | 0.025 | 0.513                         | 0.1   | 0.419 | 0.052 | 0.342 | 0.124 | 0.26  | 0.04  | 0.83  | 0.02 | 0.81 | 0.13 | 0.06 | 0.09 | 0.46 | 0.03 | 0.31 | 0.09 | 1.35 | 0.5  | 1.87 | 0.51 | 3.45 | 0.62 | 1.36 | 0.14      | 1.36                                      | 0.19                                      | At5g38420   | sedochloretic-biphosphate precursor                                     | AY054669      | AV783764    | AT3G55600.1 |             |
| RAF106-18-122                         | 1.036 | 0.409         | 1.165 | 0.242   | 1.163 | 0.257  | 0.901 | 0.19                                | 0.844 | 0.09     | 0.697 | 0.215                         | 0.759 | 0.378 | 0.564 | 0.341 | 0.478 | 0.175 | 0.79  | 0.16  | 0.78 | 0.05 | 0.48 | 0.06 | 0.32 | ###  | 0.35 | 0.05 | 1.15 | 0.34 | 1.05 | 0.05 | 0.77 | 0.07 | 0.56 | 0.08 | 0.56      | 0.15                                      | At1g44575                                 | PabS protein (PabS)   | 4.1.2.13  | AV823379      | AV784333    | AT1G44575.1 |             |
| RAF106-12-F16                         | 0.399 | 0.146         | 0.385 | 0.109   | 0.264 | 0.121  | 0.331 | 0.008                               | 0.372 | ###      | ###   | ###                           | 0.41  | 0.015 | 0.587 | 0.348 | 0.38  | 0.171 | 0.282 | 0.037 | 0.54 | 0.3  | 0.69 | 0.23 | 0.64 | 0    | 0.45 | ###  | 0.13 | 0.73 | 0.18 | 0.49 | 0.15 | 0.41 | 0.16 | 0.35 | 0.08      | 0.32                                      | 0.05                                      | At4g26530   | fructose-biphosphate aldolase - like protein                            | 4.1.2.13      | AV783703    | AT4G26530.1 |             |
| RAF106-11-K17                         | 1.62  | 0.052         | 1.399 | 0.552   | 1.004 | 0.076  | 0.988 | 0.422                               | 0.948 | 0.019    | 0.413 | 0.184                         | 0.118 | 0.07  | 1.12  | 0.021 | 0.078 | 0.012 | 0.94  | 0.73  | 0.77 | 0.13 | 0.45 | 0.06 | 0.2  | 0.02 | 0.19 | 0.08 | 1.23 | 0.14 | 1.52 | 0.06 | 1.97 | 1.26 | 2.04 | 1.86 | 0.57      | At3g01500                                 | carbonic anhydrase, chloroplast precursor | AY062785  | 4.2.1.1   | AV823995      | AV785102    | AT3G01500.1 |             |
| RAF106-13-B01                         | 1.646 | 0.345         | 1.289 | 0.348   | 0.908 | 0.015  | 0.801 | 0.228                               | 0.81  | 0.069    | 0.284 | 0.182                         | 0.095 | 0.067 | 0.102 | 0.056 | 0.02  | 1.02  | 0.85  | 0.82  | 0.18 | 0.39 | 0.01 | 0.18 | 0.06 | 0.17 | ###  | ###  | 1.26 | 0.29 | 1.49 | 0.2  | 1.89 | 1.06 | 2.04 | 0.22 | At3g01500 | carbonic anhydrase, chloroplast precursor | AY062785                                  | 4.2.1.1   | AV824068  | AV785206      | AT3G01500.1 |             |             |
| RAF106-08-A02                         | 0.658 | 0.578         | 0.986 | 0.226   | 0.908 | 0.063  | 1.222 | 0.307                               | 1.243 | 0.219    | 1.248 | 0.018                         | 2.379 | 0.026 | 2.101 | 0.378 | 2.313 | 0.182 | 0.79  | 0.28  | 1.24 | 0.11 | 0.99 | 0.25 | 0.66 | 0.09 | 0.6  | 0.19 | 0.95 | 0.43 | 0.71 | 0.09 | 0.49 | 0.13 | 0.24 | 0.14 | 0.33      | 0.04                                      | At1g29920                                 | chlorophyll a/b-binding protein                                       | AY062814  |               | AV784758    | AT1G29920.1 |             |
| RAF106-16-F14                         | 0.723 | 0.574         | 1.082 | 0.314   | 1.102 | 0.117  | 2.22  | 0.481                               | 2.511 | 0.607    | 1.736 | 0.311                         | 2.77  | 0.491 | 2.511 | 0.607 | 1.736 | 0.311 | 0.77  | 0.19  | 1.38 | 0.11 | 0.99 | 0.08 | 0.76 | 0.21 | 0.62 | 0.32 | 1.01 | 0.44 | 0.71 | 0.07 | 0.46 | 0.28 | 0.16 | 0.23 | 0.01      | At1g29920                                 | chlorophyll a/b-binding protein           | AY062814  |   | AV824232      |             |             |             |
| <b>Plant defence</b>                  |       |               |       |   |       |  |       |                                     |       |          |       |                               |       |       |       |       |       |       |       |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |   |   |               |             |             |             |
| RAF106-13-A17                         | 0.799 | 0.115         | 0.832 | 0.133   | 1.834 | 0.101  | 1.969 | 1.12                                | 10.65 | 3.089    | 2.283 | 1.572                         | 1.14  | 0.145 | 1.351 | 0.313 | 1.137 | 0.159 | 0.43  | 0.16  | 0.2  | 0.04 | 0.18 | 0.2  | 0.21 | 0.18 | 0.2  | 0.08 | 0.68 | 0.08 | 0.65 | 0.02 | 0.61 | 0.18 | 0.64 | 0.08 | 0.79      | 0.09                                      | At1g32860                                 | putative beta-1,3-glucanase precursor                                 | AY120710  |               | AV822910    | AV783778    | AT1G32860.1 |
| <b>Protease inhibitor</b>             |       |               |       |   |       |  |       |                                     |       |          |       |                               |       |       |       |       |       |       |       |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |   |   |               |             |             |             |
| RAF106-14-P04                         | 0.708 | 0.325         | 0.968 | 0.059   | 1.434 | 0.744  | 1.577 | 0.486                               | 2.63  | 0.185    | 1.682 | 0.006                         | 1.268 | 0.132 | 1.462 | 0.123 | 1.296 | 0.032 | 0.79  | 0.39  | 0.71 | 0.03 | 0.39 | 0.07 | 0.33 | 0.06 | 0.31 | 0.1  | 1.03 | 0.15 | 0.78 | 0.07 | 0.47 | 0.05 | 0.45 | 0.05 | 0.41      | 0.08                                      | At5g12140                                 | cystatin (emb)CA03929.1)  | AF411786  | AV823069      | AV783974    | AT5G12140.1 |             |
| RAF10                                 |       |               |       |   |       |  |       |                                     |       |          |       |                               |       |       |       |       |       |       |       |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |   |   |               |             |             |             |











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|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|------------------------------------|---|---|---|--------------|-------------|-------------|-------------|
| RAFL05-01-P13                          | 0.9  | 0.35 | 0.59 | 0.04 | 0.45 | 0.06 | 0.29 | 0.04 | 0.19 | 0.05 | 0.23 | 0.07 | 0.33 | 0.02 | 0.3  | 0.08 | 0.26 | 0.08 | 1.2  | 0.55 | 1.53 | 0.17 | 2.41 | 0.12 | 1.82 | 0.48 | 1.19 | 0.13 | 1.38 | 0.26 | 1.71 | 0.05 | 1.98 | 0.07 | 1.24 | 0.31      | 1.11                               | 0.17  | Atg02770  | putative photosystem I reaction center subunit II precursor | AF389290     | AV822150    | AV782819    | AT4G02770.1 |
| RAFL07-15-A19                          | 0.95 | 0.57 | 0.72 | 0.13 | 0.74 | 0    | 0.49 | 0    | 0.26 | 0.02 | 0.31 | 0.06 | 0.47 | 0.08 | 0.41 | 0.12 | 0.39 | 0.01 | 1.41 | 0.73 | 1.87 | 0.1  | 2.87 | 0.02 | 2.35 | 0.1  | 1.65 | 0.71 | 1.58 | 0.19 | 2    | 0.25 | 1.98 | 0.33 | 1.31 | 0.32      | 1.25                               | 0.03  | Atg02770  | putative photosystem I reaction center subunit II precursor | AY062512     | AV792443    | AV792443    | AT4G02770.1 |
| RAFL09-16-C21                          | 1.29 | 0.32 | 1.05 | 0.25 | 1.08 | 0.35 | 1.01 | 0.27 | 1.05 | 0.17 | 0.58 | 0.01 | 0.23 | 0.05 | 0.24 | 0.06 | 0.17 | 0.03 | 0.99 | 0.81 | 0.72 | 0.07 | 0.55 | 0.18 | 0.33 | 0.07 | 0.38 | 0    | 1.53 | 0.46 | 2.02 | 0.06 | 2.33 | 0.38 | 1.74 | 0.16      | 1.6                                | 0.06  | At5g38410   | ribulose biphosphate carboxylase small chain 3b precursor   | AF360124     | AV798416    | AV798416    | AT5G38410.1 |
| RAFL09-09-K05                          | 1.86 | 0.58 | 1.6  | 0.32 | 1.18 | 0.08 | 1.26 | 0.11 | 0.97 | 0    | 0.61 | 0.15 | 0.34 | 0.18 | 0.29 | 0.02 | 0.21 | 0    | 1.07 | 1.2  | 0.93 | 0.04 | 0.47 | 0.03 | 0.4  | 0.06 | 0.37 | 0.17 | 1.81 | 0.5  | 2.15 | 0.53 | 5.01 | 2.33 | 0.2  | 2.37      | 0.01                               | At5g38410   | ribulose biphosphate carboxylase small chain 3b precursor | AF462822  | AV826930     | AV796798    | AT5G38410.1 |             |
| RAFL11-07-D01                          | 1.49 | 0.17 | 1.47 | 0.24 | 1.74 | 0.03 | 1.27 | 0.02 | 0.98 | 0.16 | 0.61 | 0.1  | 0.43 | 0.15 | 0.34 | 0.04 | 0.27 | 0.02 | 1.05 | 0.87 | 0.94 | 0.02 | 0.57 | 0.09 | 0.42 | 0.08 | 0.44 | 0.29 | 1.46 | 0.25 | 1.74 | 0.4  | 3.18 | 1.35 | 1.84 | 0.13      | 1.84                               | 0   | At5g38410   | ribulose biphosphate carboxylase small chain 3b precursor   | AY054552     | AV832244    | AV819793    | AT5G38410.1 |
| RAFL06-14-C19                          | 1.68 | 0.24 | 1.39 | 0.23 | 1.22 | 0.33 | 1.3  | 0.14 | 0.98 | 0.11 | 0.5  | 0.23 | 0.43 | 0.13 | 0.35 | 0.07 | 0.29 | 0.01 | 1.03 | 0.87 | 0.91 | 0.01 | 0.51 | 0    | 0.46 | 0.16 | 0.37 | 0.16 | 1.54 | 0.42 | 2.08 | 0.41 | 3.6  | 0.53 | 1.64 | 0.27      | 2.22                               | 0.09  | At5g38410   | ribulose biphosphate carboxylase small chain 3b precursor   | AF410314     | AV824142    | AV785304    | AT5G38410.1 |
| RAFL04-15-J15                          | 1.38 | 0.17 | 1.26 | 0.28 | 1.18 | 0.11 | 1.15 | 0.11 | 0.75 | 0.1  | 0.59 | 0.09 | 0.42 | 0.34 | 0.13 | 0.26 | 0.05 | 0.77 | 0.35 | 0.87 | 0.1  | 0.46 | 0    | 0.4  | 0.02 | 0.3  | 0.12 | 1.38 | 0.35 | 1.44 | 0.4  | 2.66 | 0.51 | 1.35 | 0.11 | 1.25      | 0.33                               | At5g38410   | ribulose biphosphate carboxylase small chain 3b precursor | BT000721  | AV821712     | AV782245    | AT5G38410.1 |             |
| RAFL06-08-L09                          | 1.58 | 0.11 | 1.61 | 0.22 | 1.25 | 0.11 | 0.89 | 0.04 | 0.81 | 0.09 | 0.45 | 0.14 | 0.39 | 0.2  | 0.32 | 0.08 | 0.27 | 0.02 | 0.84 | 0.67 | 0.81 | 0.04 | 0.71 | 0.08 | 0.39 | 0.06 | 0.34 | 0.09 | 1.5  | 0.4  | 1.99 | 0.74 | 3.04 | 0.34 | 1.29 | 0.23      | 1.3                                | 0.39  | At5g38420   | ribulose biphosphate carboxylase small chain 2b precursor   | AY059939     | AV823779    | AV784830    | AT5G38420.1 |
| RAFL08-17-J10                          | 1.99 | 0.16 | 1.78 | 0.52 | 1.25 | 0.2  | 1.18 | 0.04 | 0.96 | 0.06 | 0.52 | 0.11 | 0.4  | 0.23 | 0.32 | 0.05 | 0.3  | 0.96 | 0.96 | 0.85 | 0.08 | 0.71 | 0.09 | 0.43 | 0.02 | 0.42 | 0.09 | 1.65 | 0.45 | 2.02 | 0.64 | 2.42 | 1.11 | 0.18 | 1.69 | 0.3       | At5g38420                          | ribulose biphosphate carboxylase small chain 2b precursor | AY062543  | AV826544  | AV795433     | AT5G38420.1 |             |             |
| RAFL07-11-L12                          | 1.91 | 0.15 | 1.83 | 0.52 | 1.16 | 0.2  | 1.21 | 0.07 | 0.86 | 0.08 | 0.53 | 0.12 | 0.39 | 0.22 | 0.33 | 0.07 | 0.28 | 0.01 | 0.93 | 0.8  | 0.87 | 0.06 | 0.67 | 0    | 0.42 | 0    | 0.38 | 0.09 | 1.58 | 0.48 | 2    | 0.71 | 4.57 | 1.77 | 0.06 | 1.62      | 0.02                               | At5g38420   | ribulose biphosphate carboxylase small chain 2b precursor | AY062437  | AV825611     | AV791714    | AT5G38420.1 |             |
| RAFL06-10-O15                          | 1.61 | 0.41 | 1.55 | 0.45 | 1.17 | 0.15 | 1.05 | 0.09 | 0.79 | 0.03 | 0.51 | 0.1  | 0.42 | 0.05 | 0.34 | 0.12 | 0.26 | 0    | 0.83 | 0.62 | 0.81 | 0.13 | 0.6  | 0.09 | 0.46 | 0.03 | 0.31 | 0.09 | 1.5  | 0.5  | 1.87 | 0.51 | 3.45 | 0.62 | 1.36 | 0.14      | 1.36                               | 0.19  | At5g38420   | ribulose biphosphate carboxylase small chain 2b precursor   | (RuBisCO si) | AV823947    | AV785043    | AT5G38420.1 |
| RAFL07-14-L17                          | 1.85 | 0.03 | 1.8  | 0.42 | 1.38 | 0.35 | 1.39 | 0.09 | 0.87 | 0.05 | 0.57 | 0.14 | 0.45 | 0.2  | 0.41 | 0.04 | 0.32 | 0.02 | 0.96 | 0.97 | 0.9  | 0.02 | 0.66 | 0.03 | 0.49 | 0.11 | 0.39 | 0.15 | 1.7  | 0.3  | 2.26 | 0.46 | 3.83 | 1.48 | 1.77 | 0.23      | 1.76                               | 0.06  | At5g38420   | ribulose biphosphate carboxylase small chain 2b precursor   | AY062458     | AV825778    | AV792375    | AT5G38420.1 |
| <b>Plant defense-related protein</b>   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                                    |   |   |   |              |             |             |             |
| RAFL04-12-M04                          | 0.85 | 0.34 | 0.79 | 0.17 | 0.54 | 0.23 | 0.28 | 0    | 0.22 | 0.05 | 0.24 | 0.01 | 0.46 | 0.11 | 0.51 | 0.27 | 0.43 | 0.05 | 1.22 | 0.23 | 1.16 | 0.03 | 1.52 | 0.58 | 1.15 | 0.59 | 1.31 | 0.09 | 1.19 | 0.46 | 1.07 | 0.41 | 1.45 | 0.23 | 0.73 | 0.2       | 0.82                               | 0.38  | At5g49730   | FRO2-like protein; NADPH oxidase-like                       | AY091140     | AV821506    | AV781989    | AT5G49730.1 |
| RAFL05-20-B01                          | 1.45 | 1.53 | 1.58 | 1.05 | 1.12 | 0.46 | 0.44 | 0.56 | 1.06 | 0.5  | 0.31 | 0.14 | 0.28 | 0.2  | 0.28 | 0.35 | 0.28 | 0.24 | 0.91 | 0.44 | 0.5  | 0.09 | 0.66 | 0.29 | 0.82 | 0.17 | 0.95 | 0.06 | 1.73 | 0.21 | 1.7  | 0.21 | 1.73 | 0.02 | 1.33 | 0.07      | 2.41                               | 0.37  | At2g40000   | putative nematode-resistance protein                        | AY080778     | AV823516    | AV784500    | AT2G40000.1 |
| RAFL02-09-C13                          | 0.79 | 0.26 | 0.42 | 0.02 | 0.3  | 0.16 | 0.5  | 0.23 | 0.6  | 0.1  | 0.41 | 0.14 | 0.39 | 0.48 | 0.06 | 0.41 | 0.03 | 1.01 | 0.06 | 0.83 | 0.13 | 1.11 | 0.09 | 1.47 | 0.33 | 1.07 | 0.2  | 0.98 | 0.15 | 1.2  | 0.2  | 1.36 | 0.48 | 1.22 | 0.22 | 1.71      | 0.41                               | At4g28240   | putative wound induced protein                            | AF372913  | AV821191     | AV781503    | AT4G28240.1 |             |
| RAFL05-17-F04                          | 0.89 | 0.47 | 0.38 | 0.02 | 0.31 | 0.03 | 0.62 | 0.06 | 0.57 | 0.09 | 0.43 | 0.03 | 0.46 | 0.04 | 0.38 | 0.05 | 0.51 | 0.07 | 1.15 | 0.19 | 1    | 0.23 | 1.19 | 0.22 | 1.5  | 0.13 | 1.33 | 0.13 | 1    | 0.13 | 1.05 | 0.09 | 1.17 | 0.03 | 1.39 | 0.12      | 1.54                               | 0.09  | At4g28240   | putative wound induced protein                              | AY050439     | AV823273    | AV784207    | AT4G28240.1 |
| <b>Protein sorting-related protein</b> |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                                    |   |   |   |              |             |             |             |
| RAFL05-16-J06                          | 1.26 | 0.06 | 0.89 | 0.05 | 0.63 | 0.07 | 0.52 | 0.11 | 0.3  | 0.03 | 0.38 | 0.07 | 0.63 | 0.06 | 0.61 | 0.19 | 0.56 | 0.04 | 1.32 | 0.33 | 1.64 | 0.13 | 2.81 | 0.38 | 2.12 | 0.67 | 2.27 | 0.16 | 1.52 | 0.28 | 1.58 | 0.2  | 1.84 | 0.16 | 1.08 | 0.25      | 1.21                               | 0.25  | At2g47450   | CAO chloroplast signal recognition particle chromo protein  | AY050442     | AV823202    | AV784134    |             |
| <b>Proteolytic degradation</b>         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                                    |   |   |   |              |             |             |             |
| RAFL09-14-O16                          | 1.2  | 0.51 | 1.03 | 0.15 | 1.56 | 0.72 | 1.09 | 0.29 | 0.55 | 0.53 | 0.44 | 0.08 | 0.48 | 0.15 | 0.4  | 0.15 | 0.3  | 0    | 1.41 | 0.94 | 1.89 | 0.06 | 2.03 | 0.31 | 1.92 | 0.3  | 2.45 | 0.23 | 1.55 | 0.4  | 2.21 | 0.28 | 2.93 | 0.53 | 1.69 | 1.5       | 3.17                               | 0.11  | At2g22990   | putative serine carboxypeptidase I                          | AY035052     | AV827395    | AV798088    | AT2G22990.1 |
| RAFL09-13-C17                          | 0.89 | 0.36 | 0.66 | 0.09 | 0.72 | 0.23 | 0.7  | 0.22 | 0.58 | 0.22 | 0.44 | 0.01 | 0.38 | 0.16 | 0.34 | 0.07 | 0.32 | 0.04 | 0.98 | 0.02 | 0.8  | 0.15 | 1.11 | 0.22 | 1.48 | 1.15 | 0.21 | 1.09 | 0.2  | 1.27 | 1.82 | 1.16 | 0.24 | 2.5  | 0.15 | At4g21650 | subtilisin proteinase like protein |   | AV827264  | AV797702  | AT4G21650.1  |             |             |             |
| <b>RNA-binding protein</b>             |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                                    |   |   |   |              |             |             |             |
| RAFL04-16-B18                          | 0.28 | 0.13 | 0.37 | 0.08 | 0.72 | 0.26 | 1.78 | 1.25 | 2.31 | 2.07 | 2.96 | 2.04 | 1.95 | 2.02 | 1.78 | 1.31 | 1.89 | 1.51 | 0.6  | 0.35 | 0.59 | 0.13 | 0.24 | 0.07 | 0.58 | 0.25 | 0.6  | 0.07 | 0.53 | 0.22 | 0.24 | 0.03 | 0.23 | 0.01 | 0.58 | 0.01      | 0.6                                | 0.02  | At2g21660   | glycine-rich RNA binding protein                            | AY042826     | AV821764    |             |             |
| <b>Senescence-related protein</b>      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                                    |   |   |   |              |             |             |             |
| RAFL02-09-H01                          | 1.34 | 1.81 | 0.86 | 0.75 | 0.42 | 0.08 | 0.46 | 0.13 | 0.25 | 0.02 | 0.52 | 0.08 | 0.4  | 0.17 | 0.51 | 0.17 | 0.35 | 0.24 | 2.48 | 0.99 | 2.43 | 0    | 8.86 | 4.76 | 11.1 | 7.59 | 4.95 | 5.91 | 1.97 | 0.79 | 3.86 | 1.75 | 12.7 | 2.16 | 7.11 | 6.09      | 8.82                               | 5.85  | At4g35770   | senescence-associated protein sen1                          | AY078973     | AV821198    | AV781512    | AT4G35770.1 |
| <b>Storage protein</b>                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                                    |   |   |   |              |             |             |             |
| RAFL05-12-E24                          | 0.41 | 0.34 | 0.3  | 0.14 | 0.74 | 0.58 | 0.64 | 0.49 | 0.53 | 0.03 | 0.21 | 0.14 | 0.19 | 0.12 | 0.11 | 0.03 | 0.17 | 0.05 | 0.92 | 0.11 | 0.76 | 0.09 | 0.79 | 0.2  | 0.69 | 0.1  | 0.58 | 0.06 | 0.97 | 0.01 | 0.93 | 0.02 | 0.9  | 1.05 | 0.1  | 1         | ####                               | At5g24780   | vegetative storage protein Vsp1                           | AF386930  | AV822842     | AV783698    | AT5G24780.1 |             |
| RAFL04-15-D02                          | 1.92 | 1.94 | 0.97 | 0.49 | 0.7  | 0.27 | 0.52 | 0.26 | 0.25 | 0.08 | 0.32 | 0.15 | 0.5  | 0.07 | 0.46 | 0.14 | 0.38 | 0.26 | 2.03 | 1.58 | 3.39 | 0.48 | 6.86 | 0.22 | 4.79 | 0.53 | 2.55 | 1.3  | 1.49 | 0.25 | 6.29 | 1.45 | 9.36 | 0.27 | 5.04 | 0.75      | 5.34                               | 2.06  | At5g44020   | vegetative storage protein-like                             | AY045786     | AV821675    | AV782199    | AT5G44020.1 |
| RAFL08-10-I23                          | 0.49 | 0.57 | 0.28 | 0.11 | 0.51 | 0.58 | 0.75 | 0.7  | 0.54 | 0.15 | 0.2  | 0.12 | 0.13 | 0.1  | 0.12 | 0.02 | 0.13 | 0.08 | 1.04 | 0.49 | 0.79 | 0.01 | 0.78 | 0.05 | 0.59 | 0.05 | 0.64 | 0.05 | 1.02 | 0.12 | 1.02 | 0.14 | 1.01 | 1.22 | 0.07 | 1.25      | 0.27                               | At5g24770   | vegetative storage protein Vsp2                           | AY048282  | AV826170     | AV793866    | AT5G24770.1 |             |
| RAFL08-11-G08                          | 0.46 | 0.53 | 0.25 | 0.1  | 0.5  | 0.64 | 0.75 | 0.8  | 0.5  | 0.18 | 0.17 | 0.11 | 0.09 | 0.09 | 0.08 | 0.03 | 0.1  | 0.07 | 0.97 | 0.49 | 0.79 | 0.08 | 0.69 | 0.09 | 0.49 | 0.11 | 0.54 | 0    | 1.03 | 0.13 | 1.02 | 0.35 | 0.93 | 1.33 | 0.37 | 1.11      | 0.41                               | At5g24770   | vegetative storage protein Vsp2                           | AY045483  | AV826219     | AV794068    | AT5G24770.1 |             |
| RAFL06-11-F24                          | 0.39 | 0.32 | 0.24 | 0.1  | 0.48 | 0.52 | 0.64 | 0.67 | 0.43 | 0.27 | 0.2  | 0.1  | 0.15 | 0.04 | 0.14 | 0.05 | 0.13 | 0.07 | 0.85 | 0.13 | 0.71 | 0.18 | 0.63 | 0.01 | 0.68 | 0.07 |      |      |      |      |      |      |      |      |      |           |                                    |   |   |   |              |             |             |             |



Supplemental Table 1-5. Genes up-regulated in cold deacclimation process identified by 22K Agilent oligonucleotide array analysis<sup>1)</sup>

| Function:Gene   | Ratio(cold acclimation/Unstressed) <sup>2)</sup> |      |      |      |      |      |       |      | Ratio(cold deacclimation after 24hr cold acclimation/ <sup>3)</sup> 24hr cold acclimation) <sup>3)</sup> |      |      |      | Ratio(deacclimation after 168hr cold acclimation/ <sup>3)</sup> 168hr cold acclimation) <sup>3)</sup> |      |      |      | AGI code <sup>4)</sup> | Annotations <sup>5)</sup>                                 | EC        | Probe ID <sup>6)</sup> | RAFL cDNA clone n:          | RAFL cDNA clone name <sup>8)</sup> |
|---|--|------|------|------|------|------|-------|------|--|------|------|------|---|------|------|------|------------------------|---|-----------|------------------------|-----------------------------|------------------------------------|
|   | 1hr  |      | 2hr  |      | 24hr |      | 168hr |      | 1hr  |      | 5hr  |      | 1hr   |      | 5hr  |      |                        |   |           |                        |                             |                                    |
|   | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.   | Std. | Av.  | Std. | Av.  | Std. | Av.   | Std. | Av.  | Std. |                        |   |           |                        |                             |                                    |
| <b>Regulatory proteins</b>  |  |      |      |      |      |      |       |      |  |      |      |      |   |      |      |      |                        |   |           |                        |                             |                                    |
| <b>Nucleic Acids-related protein</b>  |  |      |      |      |      |      |       |      |  |      |      |      |   |      |      |      |                        |   |           |                        |                             |                                    |
| AT5G40850.1   | 1.28   | 0.07 | 1.21 | 0.03 | 0.68 | 0.05 | 0.59  | 0    | 1.42   | 0.08 | 1.98 | 0.16 | 2.42  | 0.01 | 3.09 | 0.08 | At5g40850              | uroporphyrin III methylase (gb AAB92676.1)                | 2.1.1.107 | A_84_P13072            | RAFL04-20-J15               | RAFL04-20-J15                      |
| AT5G16370.1   | 1.12   | 0.02 | 1.28 | 0    | 0.56 | 0.03 | 0.62  | 0.04 | 3.01   | 0.39 | 4.51 | 0.35 | 1.51  | 0.04 | 2.84 | 0.04 | At5g16370              | AMP-binding protein                                       |           | A_84_P11133            | RAFL09-83-G01               | RAFL09-83-G01                      |
| AT1G09140.2   | 1.32   | 0    | 1.16 | 0.04 | 0.36 | 0.06 | 0.33  | 0.03 | 1.4  | 0.21 | 2.3  | 0.49 | 1.39  | 0.25 | 3.12 | 0.48 | At1g09140              | arginine/serine-rich splicing factor, atSRp30             |           | A_84_P217458           | RAFL08-12-I05               | RAFL08-12-I05,RAFL16-56-K16        |
| AT1G06760.1   | 0.65   | 0.01 | 0.56 | 0.02 | 0.44 | 0.04 | 0.3   | 0    | 3.14   | 0.34 | 2.37 | 0.13 | 1.87  | 0.01 | 3.04 | 0.1  | At1g06760              | histone H1, putative                                      |           | A_84_P22232            | RAFL05-16-P20,RAFL14-83-K09 | RAFL05-16-P20,RAFL14-83-K09        |
| AT2G18050.1   | 0.44   | 0.08 | 0.62 | 0.01 | 0.31 | 0.02 | 0.55  | 0.18 | 2.35   | 0.13 | 6.29 | 1.27 | 1.38  | 0.38 | 2.1  | 0.54 | At2g18050              | histone H1  |           | A_84_P15441            | RAFL05-20-P13               | RAFL05-20-P13                      |
| <b>Protein kinase</b>   |  |      |      |      |      |      |       |      |  |      |      |      |   |      |      |      |                        |   |           |                        |                             |                                    |
| AT5G66880.1   | 0.37   | #### | 0.42 | 0.02 | 0.27 | 0.01 | 0.36  | 0.06 | 1.79   | 0.13 | 4    | 0.44 | 1.52  | 0.04 | 2.81 | 0.35 | At5g66880              | protein kinase, 41K (EC 2.7.1.-) (pir [S71172])           | 2.7.1.-   | A_84_P16007            | RAFL06-89-M02               | RAFL06-89-M02                      |
| <b>Protein phosphatase</b>  |  |      |      |      |      |      |       |      |  |      |      |      |   |      |      |      |                        |   |           |                        |                             |                                    |
| AT5G59220.1   | 1.99   | 0.29 | 2.26 | 0.14 | 0.7  | 0.11 | 0.64  | 0.04 | 2.25   | 0.2  | 1.89 | 0.02 | 5.83  | 0.14 | 1.49 | 0.17 | At5g59220              | protein phosphatase 2C (PP2C)                             | 3.1.3.16  | A_84_P11248            | RAFL09-70-P08               | RAFL09-70-P08                      |
| <b>Transcription factor</b>   |  |      |      |      |      |      |       |      |  |      |      |      |   |      |      |      |                        |   |           |                        |                             |                                    |
| AT3G04730.1   | 0.87   | 0.09 | 0.99 | 0.08 | 0.44 | 0.03 | 0.36  | 0.07 | 2.38   | 0.21 | 2.96 | 0.08 | 1.92  | 0.28 | 3    | 0.47 | At3g04730              | auxin-induced protein                                     |           | A_84_P23996            | RAFL02-10-C07               | RAFL02-10-C07                      |
| AT1G73830.1   | 1.28   | 0    | 1.56 | 0.11 | 0.36 | 0.03 | 0.41  | 0.08 | 3.63   | 0.26 | 3.42 | 0.34 | 1.15  | 0.2  | 2.84 | 0.69 | At1g73830              | putative helix-loop-helix DNA-binding protein             |           | A_84_P22810            | RAFL21-11-M10               | RAFL21-11-M10                      |
| AT3G24500.1   | 0.96   | 0.07 | 1.38 | 0.08 | 0.28 | 0.01 | 0.29  | 0.05 | 3.77   | 0.63 | 4.52 | 0.78 | 10.3  | 0.36 | 4.98 | 0.6  | At3g24500              | ethylene-responsive transcriptional coactivator, putative |           | A_84_P11731            | RAFL14-50-M16               | RAFL14-50-M16                      |
| AT2G26150.1   | 1.32   | 0.33 | 1.34 | 0.15 | 1.19 | #### | 0.93  | 0.04 | 1.12   | 0.21 | 0.99 | 0.15 | 5.55  | 3.91 | 1.16 | 0.1  | At2g26150              | putative heat shock transcription factor                  |           | A_84_P19231            | RAFL21-09-G23               | RAFL21-09-G23                      |
| AT1G79700.1   | 0.6  | 0.04 | 0.62 | 0.01 | 1.04 | 0.12 | 1.2   | 0.1  | 1.84   | 0.01 | 4.6  | 0.06 | 1.05  | 0.16 | 2.53 | 0.3  | At1g79700              | ovule development protein, putative                       |           | A_84_P21850            | RAFL16-86-I04               | RAFL16-86-I04,RAFL16-93-K12        |
| AT4G01460.1   | 1.83   | 0.19 | 1.95 | 0.2  | 0.44 | 0.05 | 0.68  | 0.06 | 1.31   | 0.26 | 3.28 | 0.58 | 1.54  | 0.09 | 1.19 | 0.05 | At4g01460              | bHLH protein  |           | A_84_P17553            | RAFL09-81-B05               | RAFL09-81-B05                      |
| AT5G65640.1   | 0.79   | 0.02 | 1.05 | 0.04 | 0.25 | 0.1  | 0.65  | 0.12 | 1.73   | 0.15 | 3.39 | 0.01 | 1.11  | 0.11 | 2.06 | 0.24 | At5g65640              | bHLH protein  |           | A_84_P50370            | RAFL16-31-I19               | RAFL16-31-I19                      |
| AT2G43010.1   | 0.45   | 0.01 | 0.42 | 0.01 | 0.24 | 0.05 | 0.31  | 0.01 | 1.49   | 0.22 | 4.43 | 0.68 | 1.42  | 0.05 | 2.51 | 0.16 | At2g43010              | expressed protein   |           | A_84_P162983           | RAFL09-15-L21               | RAFL09-15-L21                      |
| AT3G10040.1   | 1.01   | 0.2  | 0.92 | 0.09 | 0.1  | 0.03 | 0.15  | 0.01 | 2.7  | 1.46 | 15.7 | 8.4  | 8.26  | 0.68 | 20.5 | 1.56 | At3g10040              | unknown protein   |           | A_84_P11697            | RAFL09-40-M19               | RAFL09-40-M19                      |
| AT5G53980.1   | 0.96   | 0.11 | 0.95 | 0.11 | 0.57 | 0.07 | 0.83  | 0.07 | 1.4  | 0.02 | 3.08 | 0.14 | 1.57  | 0.03 | 2.13 | 0.1  | At5g53980              | unknown protein   |           | A_84_P122462           | RAFL16-49-M21               | RAFL16-49-M21                      |
| AT1G19000.1   | 1.19   | 0.03 | 1.06 | 0.09 | 0.35 | 0.02 | 0.52  | 0.03 | 1.94   | 0.09 | 3.2  | 0.2  | 1.39  | 0.03 | 2    | 0.14 | At1g19000              | myb family transcription factor                           |           | A_84_P22688            | RAFL05-19-H01               | RAFL05-19-H01                      |
| <b>Functional proteins involved in recovery process from cold-stress-induced damages and plant growth</b> |  |      |      |      |      |      |       |      |  |      |      |      |   |      |      |      |                        |   |           |                        |                             |                                    |
| <b>Auxin-regulated protein</b>  |  |      |      |      |      |      |       |      |  |      |      |      |   |      |      |      |                        |   |           |                        |                             |                                    |
| AT5G18010.1   | 1.11   | 0.09 | 0.91 | 0.1  | 0.28 | 0.04 | 0.17  | 0.02 | 1.22   | 0.15 | 3.86 | 0.71 | 1.8   | 0.07 | 3.04 | 0.59 | At5g18010              | auxin-induced protein (SAUR), putative                    |           | A_84_P196504           | RAFL16-56-G05               | RAFL16-56-G05                      |
| AT5G18050.1   | 1.16   | 0.17 | 0.99 | 0.13 | 0.38 | 0.06 | 0.23  | 0.01 | 1.29   | 0.13 | 3.09 | 0.21 | 1.59  | 0.3  | 2.33 | 0.19 | At5g18050              | auxin-induced protein-like                                |           | A_84_P141269           | RAFL05-14-K17               | RAFL05-14-K17                      |
| AT4G27260.1   | 1.12   | 0.13 | 1.36 | 0.09 | 0.61 | 0.01 | 1.05  | 0.18 | 1.8  | 0.16 | 4.77 | 0.09 | 1.1   | 0.17 | 1.5  | 0.26 | At4g27260              | GH3 like protein  |           | A_84_P13850            | RAFL05-14-K17               | RAFL05-14-K17                      |
| AT5G18060.1   | 1.15   | 0.07 | 0.95 | 0.06 | 0.31 | 0.03 | 0.18  | 0.04 | 1.24   | 0.08 | 3.37 | 0.16 | 1.82  | 0.01 | 2.98 | 0.5  | At5g18060              | auxin-induced protein-like                                |           | A_84_P94979            | RAFL05-14-K17               | RAFL05-14-K17                      |
| <b>Carbohydrate metabolism-related protein</b>  |  |      |      |      |      |      |       |      |  |      |      |      |   |      |      |      |                        |   |           |                        |                             |                                    |
| AT5G20250.1   | 0.86   | 0.06 | 0.8  | 0.04 | 0.55 | 0    | 0.36  | 0.02 | 4.34   | 0.11 | 9.68 | 0.23 | 2.98  | 0.11 | 8.34 | 0.56 | At5g20250              | glycosyl hydrolase family 36                              |           | A_84_P14131            | RAFL09-96-G12               | RAFL09-96-G12                      |
| AT5G49360.1   | 1.51   | 0.27 | 1.43 | 0.06 | 0.31 | 0.02 | 0.24  | 0.03 | 2.86   | 0.63 | 9.36 | 5.53 | 1.51  | 0.2  | 8.53 | 1.06 | At5g49360              | glycosyl hydrolase family 3                               |           | A_84_P16885            | RAFL09-07-E15               | RAFL09-07-E15                      |
| AT3G45230.1   | 0.93   | 0.01 | 0.77 | 0.09 | 0.35 | 0.05 | 0.3   | 0.04 | 1.74   | 0.04 | 3.31 | 0.04 | 2.3   | 0.45 | 3.35 | 0.8  | At3g45230              | hydroxyproline-rich glycoprotein-related                  |           | A_84_P21250            | RAFL19-84-N21               | RAFL19-84-N21                      |
| AT5G63600.1   | 0.8  | 0.17 | 0.74 | 0.06 | 0.4  | 0.07 | 0.4   | 0.07 | 1.24   | 0.29 | 3.59 |      | 1.44  | 0.22 | 4.75 | 0.56 | At5g63600              | flavonol synthase family                                  |           | A_84_P23561            | RAFL06-67-I01               | RAFL06-67-I01                      |
| AT3G13750.1   | 1.32   | 0.11 | 1.29 | 0.09 | 0.33 | 0.01 | 0.34  | 0.03 | 1.3  | 0.04 | 7.18 | 0.33 | 1.18  | 0.01 | 6.01 | 0.03 | At3g13750              | glycosyl hydrolase family 35 (beta-galactosidase)         |           | A_84_P12720            | RAFL04-10-F19               | RAFL04-10-F19                      |
| AT1G03870.1   | 1.14   | 0.13 | 1.04 | 0.12 | 0.64 | 0.04 | 0.5   | 0.05 | 1.49   | 0.1  | 4.01 | 0.23 | 2.05  | 0.13 | 3.81 | 0.02 | At1g03870              | fasciclin-like arabinogalactan-protein (FLA9)             |           | A_84_P15139            | RAFL09-45-B03               | RAFL09-45-B03                      |
| AT5G48900.1   | 0.93   | 0.06 | 0.82 | 0    | 0.49 | 0.01 | 0.32  | 0.05 | 0.95   | 0.01 | 3.06 | 0.14 | 1.61  | 0.22 | 3.1  | 0.69 | At5g48900              | polysaccharide lyase family 1 (pectate lyase)             |           | A_84_P10266            | RAFL07-10-G16               | RAFL07-10-G16                      |
| AT3G43190.1   | 0.87   | 0.18 | 0.98 | 0.14 | 0.17 | 0.02 | 0.33  | 0.06 | 1.04   | 0.08 | 7.46 | 0.32 | 0.93  | 0.15 | 9.31 | 0.8  | At3g43190              | sucrose synthase, putative                                | 2.4.1.13  | A_84_P20298            | RAFL05-07-J05               | RAFL05-07-J05,RAFL14-25-C06        |
| AT2G22980.1   | 0.3  | 0.03 | 0.35 | 0.02 | 0.36 | 0.01 | 0.5   | 0.02 | 1.18   | 0.16 | 3.03 | 0.43 | 1.02  | 0.05 | 1.21 |      | At2g22980              | putative serine carboxypeptidase I                        |           | A_84_P21085            | RAFL06-13-N10               | RAFL06-13-N10                      |
| AT5G56870.1   | 0.94   | 0.03 | 0.91 | 0.02 | 0.52 | 0.04 | 0.43  | 0.02 | 1.39   | 0.14 | 3.87 | 0.86 | 1.03  | 0.04 | 2.51 | 0    | At5g56870              | glycosyl hydrolase family 35 (beta-galactosidase)         |           | A_84_P12184            | RAFL11-07-J10               | RAFL11-07-J10                      |
| AT1G64660.1   | 1.54   | #### | 1.35 | 0.01 | 0.5  | 0.07 | 0.57  | 0.04 | 1  | 0.01 | 4.67 | 0.26 | 1.18  | 0.07 | 2.68 |      | At1g64660              | methionine/cystathionine gamma lyase, putative            |           | A_84_P12315            | RAFL05-18-H15               | RAFL05-18-H15                      |
| AT1G12780.1   | 0.68   | 0.03 | 0.71 | 0.03 | 0.64 | 0.05 | 1.08  | 0.13 | 2.26   | 0.23 | 5.18 | 0.23 | 1.06  | 0.17 | 1.93 |      | At1g12780              | uridine diphosphate glucose epimerase                     | 5.1.3.2   | A_84_P19988            | RAFL05-11-O04               | RAFL05-11-O04                      |
| AT1G02850.1   | 1.3  | 0.03 | 1.39 | 0    | 0.61 | 0.02 | 0.75  | 0.01 | 0.94   | 0.08 | 2.51 | 0.15 | 1.25  | 0.06 | 3.11 | 0.32 | At1g02850              | glycosyl hydrolase family 1                               | 3.2.1.21  | A_84_P20984            | RAFL09-06-G17               | RAFL09-06-G17                      |
| <b>Cellular metabolism-related protein</b>  |  |      |      |      |      |      |       |      |  |      |      |      |   |      |      |      |                        |   |           |                        |                             |                                    |
| AT1G17990.1   | 0.75   | 0.04 | 0.73 | 0.07 | 0.19 | 0.03 | 0.39  | 0.03 | 2.6  | 0.5  | 6.07 | 0.38 | 3.54  | 0.18 | 3.32 | 0.31 | At1g17990              | 12-oxophytodienoate reductase, putative                   |           | A_84_P22857            | RAFL19-47-N03               | RAFL19-47-N03                      |
| AT4G04610.1   | 1.06   | 0.21 | 1.07 | 0.09 | 0.16 | 0.04 | 0.36  | 0.06 | 2.28   | 0.81 | 2.34 | 0.81 | 3.38  | 0.25 | 1.22 | 0.08 | At4g04610              | 5-adenylsulfate reductase                                 | 1.8.4.9   | A_84_P10947            | RAFL09-34-D13               | RAFL09-34-D13                      |
| AT3G51000.1   | 0.79   | 0.06 | 0.89 | 0.11 | 0.32 | 0.08 | 0.46  | 0.01 | 1.35   | 0.31 | 3.86 | 1.03 | 1.3   | 0.11 | 2.41 | 0.18 | At3g51000              | epoxide hydrolase-like protein                            |           | A_84_P14655            | RAFL09-14-G09               | RAFL09-14-G09                      |
| AT5G51970.1   | 0.87   | 0.02 | 0.79 | 0.01 | 0.46 | 0.01 | 0.62  | 0.03 | 1.31   | 0.01 | 4.14 | 0.24 | 1.21  | 0.01 | 2.67 | 0.08 | At5g51970              | sorbitol dehydrogenase-like protein                       | 1.1.1.14  | A_84_P20678            | RAFL05-10-F02               | RAFL05-10-F02                      |
| AT3G06850.2   | 0.83   | 0    | 0.85 | 0.04 | 0.59 | 0.03 | 0.71  | 0.04 | 1.39   | 0.22 | 3.25 | 0.73 | 1.22  | 0.14 | 1.96 | 0.54 | At3g06850.2            | branched chain alpha-keto acid dehydrogenase E2 subunit   | 2.3.1.-   | A_84_P23064            | RAFL05-08-D07               | RAFL05-08-D07                      |
| AT2G43820.1   | 1.62   | 0.15 | 1.87 | 0.17 | 0.79 | 0.23 | 1.29  | 0.27 | 1.79   | 0.03 | 3.04 | 0.01 | 1.06  | 0.18 | 1.54 | 0.24 | At2g43820              | putative glucosyltransferase                              |           | A_84_P12497            | RAFL07-12-I23               | RAFL07-12-I23                      |
| AT3G47340.1   | 0.33   | 0.01 | 0.43 | 0    | 0.22 | 0.01 | 0.28  | 0.01 | 1.81   | 0.06 | 13.6 | 0.02 | 1.22  | 0.05 | 1.21 | 0.19 | At3g47340              | glutamine-dependent asparagine synthetase                 | 6.3.5.4   | A_84_P19368            | RAFL09-07-G09               | RAFL09-07-G09                      |
| AT5G54080.1   | 0.63   | 0.03 | 0.62 | 0.01 | 0.59 | 0.01 | 0.8   | 0.01 | 1.46   | 0.03 | 3.62 | 0.13 | 0.99  | 0.02 | 2.35 | 0.04 | At5g54080              | homogentisate 1,2-dioxygenase                             | 1.13.11.5 | A_84_P18793            | RAFL09-66-C23               | RAFL09-66-C23                      |
| AT3G45300.1   | 0.84   | 0.01 | 1.01 | 0.19 | 0.91 | 0.09 | 1.13  | 0.17 | 2.28   | 0.4  | 3.63 | 0.77 | 1.03  | 0.16 | 2.43 | 0.3  |                        |   |           |                        |                             |                                    |

| Membrane protein                        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |  |             |               |                             |                             |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--|-------------|---------------|-----------------------------|-----------------------------|
| AT3G16240.1                             | 1.21 | 0.22 | 1.01 | 0.12 | 0.23 | 0.07 | 0.1  | 0.02 | 2.13 | 0.8  | 13.4 | 3.51 | 3.57 | 0.66 | 15.3 | 0.42 | At3g16240 | delta tonoplast integral protein (delta-TIP)                     | A_84_P24028 | RAFL06-09-P22 | RAFL06-09-P22,RAFL09-44-A13 |                             |
| AT4G35100.1                             | 1.28 | 0.16 | 1.09 | 0.2  | 0.47 | 0.14 | 0.3  | 0.03 | 1.14 | 0.39 | 4.05 | 1.34 | 2    | 0.17 | 4.34 | 0.41 | At4g35100 | plasma membrane intrinsic protein (SIMIP)                        | A_84_P22397 | RAFL06-08-F07 | RAFL06-08-F07               |                             |
| AT1G01620.1                             | 1.14 | 0.32 | 0.99 | 0.22 | 0.45 | 0.18 | 0.36 | 0.1  | 1.42 | 0.6  | 4.46 | 1.48 | 1.8  | 0.46 | 3.16 |      | At1g01620 | plasma membrane intrinsic protein 1c, putative                   | A_84_P21744 | RAFL09-06-M22 | RAFL09-06-M22               |                             |
| AT3G61430.1                             | 1.28 | 0.13 | 1.03 | 0.16 | 0.29 | 0.04 | 0.31 | 0.04 | 1.23 | 0.28 | 3.91 | 0.85 | 1.42 | 0.15 | 2.71 | 0.23 | At3g61430 | plasma membrane intrinsic protein 1a                             | A_84_P16590 | RAFL06-12-E09 | RAFL06-12-E09               |                             |
| AT3G26520.1                             | 1.05 | 0.07 | 0.83 | #### | 0.46 | 0.04 | 0.4  | 0.01 | 1.55 | 0.26 | 4.42 | 0.62 | 0.94 | 0.05 | 3.25 | 0.09 | At3g26520 | gamma tonoplast intrinsic protein                                | A_84_P18369 | RAFL09-07-O12 | RAFL09-07-O12               |                             |
| Osmoprotectant-related protein          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |  |             |               |                             |                             |
| AT3G30775.1                             | 1.42 | 0.05 | 1.46 | 0.1  | 1.02 | 0.16 | 1.25 | 0.04 | 1.51 | 0.11 | 2.68 | 0.34 | 1.39 | 0.04 | 3.03 | 0.06 | At3g30775 | hypothetical protein   | 1.5.3.-     | A_84_P22153   | RAFL05-17-E01               | RAFL05-17-E01               |
| Photosynthesis-related protein          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |  |             |               |                             |                             |
| AT5G14740.1                             | 1.77 | 0.07 | 1.59 | 0.07 | 0.59 | 0.02 | 0.23 | 0.01 | 1.13 | 0.03 | 1.45 | 0.05 | 1.47 | 0.22 | 3.01 | 0.31 | At5g14740 | CARBONIC ANHYDRASE 2   | 4.2.1.1     | A_84_P18848   | RAFL09-72-H13               | RAFL09-72-H13               |
| AT3G01500.1                             | 1.42 | 0.22 | 1.13 | 0.13 | 0.51 | 0.08 | 0.04 | 0    | 0.83 | 0.09 | 0.36 | 0.05 | 1.49 | 0.04 | 3.04 | #### | At3g01500 | carbonic anhydrase, chloroplast precursor                        | 4.2.1.1     | A_84_P14520   | RAFL06-13-B01               | RAFL06-13-B01               |
| AT3G52720.1                             | 1.97 | 0.14 | 1.62 | 0.28 | 0.11 | 0.08 | 0.2  | 0.06 | 1.25 | 0.7  | 6.34 | 2.07 | 1.31 | 0.68 | 2.82 | 0.89 | At3g52720 | carbonic anhydrase (CAH1)  |             | A_84_P23174   | RAFL07-11-M22               | RAFL07-11-M22               |
| AT5G38410.1                             |      |      |      | 0.36 |      |      |      |      | 0.86 | 0.24 | 0.57 | 0.17 | 2.67 | 0.09 | 8.82 | 0.99 | At5g38410 | ribulose biphosphate carboxylase small chain 3b precursor        | 4.1.1.39    | A_84_P286650  | RAFL06-14-C19               | RAFL06-14-C19               |
| AT5G38420.1                             | 1.47 | 0.11 | 0.89 | 0.01 | 0.4  | 0.11 | 0.06 | #### | 0.82 | 0.36 | 1.27 | 0.62 | 4.1  | 0.2  | 9.93 | 1.24 | At5g38420 | ribulose biphosphate carboxylase small chain 2b precursor        | 4.1.1.39    | A_84_P96326   | RAFL06-08-L09               | RAFL06-08-L09               |
| AT1G51400.1                             | 0.61 | 0.17 | 0.58 | 0.21 | 0.08 | 0.02 | 0.09 | 0.03 | 1.58 | 0.42 | 8.94 |      | 3.38 | 0.75 | 5.71 | 1.33 | At1g51400 | photosystem II 5 KD protein                                      |             | A_84_P19893   | RAFL05-17-G01               | RAFL05-17-G01               |
| AT1G03130.1                             | 0.49 | 0.06 | 0.52 | 0.1  | 0.1  | 0.01 | 0.13 | 0.01 | 1.55 | 0.13 | 5.92 | 0.42 | 2.75 | 0.15 | 4.03 | 0.2  | At1g03130 | putative photosystem I reaction center subunit II precursor      |             | A_84_P23709   | RAFL02-02-L10               | RAFL02-02-L10               |
| AT3G26740.1                             | 0.2  | 0.03 | 0.22 | #### | 0.31 | 0.01 | 0.25 | 0.03 | 1.69 | 0.18 | 4.05 | 0.44 | 0.79 | 0.04 | 3.47 |      | At3g26740 | light regulated protein, putative                                |             | A_84_P16468   | RAFL06-15-H18               | RAFL06-15-H18               |
| AT3G27690.1                             | 0.73 | 0.05 | 0.55 | 0.04 | 0.15 | 0.02 | 0.06 | 0.01 | 1.04 | 0.17 | 1.73 | 0.36 | 3.03 | 0.47 | 2.41 | 0.35 | At3g27690 | light harvesting chlorophyll A/B binding protein, putative       |             | A_84_P24021   | RAFL05-11-L07               | RAFL05-11-L07               |
| AT3G08940.1                             | 1.63 | 0.02 | 0.57 | 0.04 | 0.21 | 0.02 | 0.27 |      | 0.69 | 0.06 | 4.14 | 0.05 | 1.6  | 0.06 | 2.24 | 0.15 | At3g08940 | putative chlorophyll a/b-binding protein                         |             | A_84_P20202   | RAFL06-09-F16               | RAFL06-09-F16               |
| AT1G76100.1                             | 1.04 | 0.05 | 0.83 | 0.01 | 0.29 | 0.02 | 0.38 | 0.02 | 1.24 | 0.01 | 3.09 | 0.39 | 2.2  | 0.18 | 2.5  | 0.08 | At1g76100 | plastocyanin   |             | A_84_P14364   | RAFL04-10-A08               | RAFL04-10-A08               |
| Plant defense-related protein           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |  |             |               |                             |                             |
| AT3G12610.1                             | 0.76 | 0.06 | 0.67 | 0.04 | 0.36 | 0.04 | 0.41 | 0.03 | 0.93 | 0.09 | 3.26 | 0.33 | 1.41 | 0.05 | 2.23 | 0.06 | At3g12610 | DNA-damage-repair/tolerance protein, putative (DRT100)           |             | A_84_P17455   | RAFL09-46-I18               | RAFL09-46-I18               |
| Proteolytic degradation                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |  |             |               |                             |                             |
| AT5G19120.1                             | 1.45 | 0.15 | 1.25 | 0.13 | 0.41 | 0.05 | 0.6  | 0.07 | 6.02 | 0.87 | 5.61 | 0.73 | 2.07 | 0.19 | 2.72 | 0.24 | At5g19120 | conglutin gamma - like protein                                   |             | A_84_P13976   | RAFL11-11-J05               | RAFL11-11-J05               |
| AT5G57900.1                             | 0.96 | 0.13 | 0.98 | 0.07 | 0.47 | 0.01 | 0.53 | 0.1  | 1.62 | 0.17 | 3.05 | 0.69 | 1.65 | 0.36 | 1.99 | 0.48 | At5g57900 | SKP1 interacting partner 1 (SKIP1)                               |             | A_84_P19752   | RAFL16-84-N02               | RAFL16-84-N02               |
| AT1G63800.1                             | 0.37 | 0.05 | 0.44 | 0.03 | 0.29 | 0.02 | 0.32 | 0.01 | 1.23 | 0.15 | 4.05 | 0.6  | 1.2  | 0.12 | 3.4  |      | At1g63800 | E2, ubiquitin-conjugating enzyme 5 (UBC5)                        | 6.3.2.19    | A_84_P14319   | RAFL05-20-O07               | RAFL05-20-O07               |
| Senescence-related protein              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |  |             |               |                             |                             |
| AT4G35770.1                             | 0.56 | 0.03 | 0.58 | 0.02 | 0.42 | 0.05 | 0.38 | 0.01 | 5.87 | 0.39 | 17.9 | 1.23 | 2.24 | 0.05 | 11.3 | 1.14 | At4g35770 | senescence-associated protein sen1                               |             | A_84_P22400   | RAFL02-09-H01               | RAFL02-09-H01               |
| Storage protein                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |  |             |               |                             |                             |
| AT5G44020.1                             | 0.96 | 0.15 | 1.14 | 0.11 | 0.63 | 0.05 | 0.52 | 0.15 | 1.46 | 0.19 | 6.2  | 0.59 | 2    | 0.43 | 5.07 | 0.98 | At5g44020 | vegetative storage protein-like                                  |             | A_84_P13082   | RAFL04-15-D02               | RAFL04-15-D02               |
| Transport protein, ion channel, carrier |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |  |             |               |                             |                             |
| AT1G11260.1                             | 0.88 | 0.1  | 0.86 | 0.09 | 1.26 | 0.14 | 0.85 | 0.11 | 2.62 | 0.3  | 3.32 | 0.38 | 1    | 0.12 | 3.23 | 0.42 | At1g11260 | glucose transporter  |             | A_84_P10638   | RAFL07-09-F22               | RAFL07-09-F22               |
| AT1G52190.1                             | 0.78 | 0.17 | 0.89 | 0.05 | 0.31 | 0.03 | 0.38 | 0.1  | 1.33 | 0.11 | 6.45 | 0.62 | 1.66 | 0.37 | 4.45 | 0.97 | At1g52190 | peptide transporter, putative                                    |             | A_84_P16241   | RAFL09-10-I18               | RAFL09-10-I18               |
| AT1G77210.1                             | 0.52 | 0.03 | 0.55 | 0.05 | 0.78 | 0.07 | 0.75 | 0.03 | 1.73 | 0.09 | 3.88 | 0.2  | 1.23 | 0.02 | 2.22 | 0.11 | At1g77210 | sugar carrier protein, putative                                  |             | A_84_P10447   | RAFL21-39-L21               | RAFL21-39-L21               |
| AT4G22200.1                             | 1.32 | 0.01 | 1.45 | 0.13 | 0.24 | 0.03 | 0.44 | 0.06 | 1.42 | 0.08 | 3.35 | 0.36 | 1.15 | 0.2  | 1.28 | 0.15 | At4g22200 | potassium channel protein AKT3                                   |             | A_84_P21394   | RAFL21-48-C06               | RAFL21-48-C06               |
| AT5G64410.1                             | 0.85 | 0.07 | 0.89 | 0.03 | 0.47 | 0.03 | 1.04 | 0.15 | 1.65 | 0.09 | 4.45 | 0.3  | 1.24 | 0.11 | 1.83 | 0.3  | At5g64410 | lsp4-like protein  |             | A_84_P19781   | RAFL09-47-C24               | RAFL09-47-C24               |
| Water channel protein                   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |  |             |               |                             |                             |
| AT2G36830.1                             | 1.8  | 0.07 | 1.48 | 0.03 | 0.56 | 0.05 | 0.27 | 0    | 1.23 | 0.09 | 2.22 | 0.21 | 1.51 | 0.01 | 3.76 | 0.07 | At2g36830 | putative aquaporin (tonoplast intrinsic protein gamma)           |             | A_84_P13526   | RAFL05-05-O01               | RAFL05-05-O01               |
| AT2G37170.1                             | 1.37 | 0.28 | 1.29 | 0.32 | 0.37 | 0.1  | 0.29 | 0.06 | 1.3  | 0.38 | 3.21 | 0.98 | 1.42 | 0.35 | 2.83 | 0.5  | At2g37170 | aquaporin (plasma membrane intrinsic protein 2B)                 |             | A_84_P20080   |                             |                             |
| Unknown                                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |  |             |               |                             |                             |
| AT3G28860.1                             | 0.82 | 0.13 | 0.76 | 0.1  | 0.41 | 0.08 | 0.55 | 0.05 | 0.91 | 0.15 | 3.44 | 0.74 | 1.12 | 0.15 | 1.74 | 0.17 | At3g28860 | multidrug resistance P-glycoprotein, putative                    |             | A_84_P21217   | RAFL16-71-B15               | RAFL16-71-B15               |
| AT3G14210.1                             | 0.81 | 0.07 | 0.77 | 0.02 | 0.26 | 0.01 | 0.35 | 0.01 | 0.9  | 0.13 | 3.29 | 0.45 | 1.55 | 0.12 | 2.41 | 0.15 | At3g14210 | myrosinase-associated protein, putative                          |             | A_84_P22166   |                             | RAFL09-06-D04               |
| AT2G33740.1                             | 0.91 | 0.11 | 0.81 | 0.17 | 0.47 | 0.08 | 0.72 | 0.15 | 1.03 | 0.27 | 3.09 | 0.69 | 1.11 | 0.21 | 2.07 | 0.42 | At2g33740 | putative related to microbial divalent cation tolerance proteins |             | A_84_P21134   |                             |                             |
| AT1G33780.1                             | 0.84 | 0.17 | 0.78 | 0.1  | 0.32 | 0.02 | 0.58 | 0.11 | 1.91 | 0.22 | 3.13 | 0.23 | 1.34 | 0.17 | 1.83 | 0.25 | At1g33780 | chloroplast lumen common protein family                          |             | A_84_P12288   | RAFL06-08-H16               | RAFL06-08-H16               |
| AT3G29240.1                             | 1.53 | 0.26 | 1.47 | 0.28 | 0.49 | 0.11 | 0.47 | 0.08 | 2.08 | 0.5  | 3.14 | 0.63 | 1.51 | 0.3  | 2.49 | 0.49 | At3g29240 | chloroplast lumen common protein family                          |             | A_84_P276860  | RAFL04-20-L13               | RAFL04-20-L13               |
| AT2G32150.1                             | 0.76 | 0.03 | 0.83 | 0.19 | 0.32 | 0.08 | 0.33 | 0.03 | 2.25 | 0.18 | 4.5  | 0.27 | 1.25 | 0.44 | 2.45 |      | At2g32150 | putative hydrolase   |             | A_84_P13560   | RAFL09-47-M11               | RAFL09-47-M11               |
| AT5G25280.1                             | 1.04 | 0    | 0.71 | 0.01 | 0.59 | 0.01 | 0.73 | 0    | 3.68 | 0.17 | 2.98 | 0.08 | 1.62 | 0.04 | 1.76 | 0.03 | At5g25280 | serine-rich protein  |             | A_84_P16824   | RAFL06-77-I09               | RAFL06-77-I09,RAFL07-18-N06 |
| AT1G35140.1                             | 2.61 | 0.25 | 4.12 | 0.06 | 1.76 | 0.16 | 1.13 | 0.02 | 2.17 | 0.41 | 1.09 | 0.19 | 4.28 | 0.23 | 1.88 | 0.07 | At1g35140 | phosphate-induced (phi-1) protein, putative                      |             | A_84_P20998   | RAFL11-07-P08               | RAFL11-07-P08               |
| AT5G63190.1                             | 0.64 | 0.04 | 0.73 | 0.07 | 0.43 | 0.01 | 0.68 | 0.1  | 1.67 | 0    | 5.12 | 0.04 | 1.28 | 0.15 | 2.84 | 0.32 | At5g63190 | topoisomerase, putative  |             | A_84_P16938   | RAFL04-10-G08               | RAFL04-10-G08               |
| AT5G21170.1                             | 0.82 | 0    | 0.73 | 0.02 | 0.62 | 0.01 | 0.82 | 0.07 | 2.53 | 0.25 | 5.72 | 0.22 | 1.24 | 0.18 | 2.92 | 0.34 | At5g21170 | AKIN beta1   |             | A_84_P17919   | RAFL09-49-K18               | RAFL09-49-K18               |
| AT4G33560.1                             | 0.93 | 0.11 | 1.29 | 0.02 | 0.19 | 0.02 | 0.19 | 0.03 | 1.16 | 0.1  | 4.96 | 1.08 | 1.92 | 0.04 | 5.63 | 0.15 | At4g33560 | putative protein   |             | A_84_P81559   |                             |                             |
| AT3G26510.1                             | 1.38 | 0.25 | 1.2  | 0.04 | 0.2  | 0.03 | 0.34 | 0.08 | 8.98 | 0.06 | 9.7  | 0.49 | 4.12 | 1.11 | 5.3  | 1.46 | At3g26510 | unknown protein  |             | A_84_P158275  | RAFL16-59-E06               | RAFL16-59-E06               |
| AT5G44680.1                             | 0.7  | 0.12 | 0.64 | 0.02 | 0.46 | 0.07 | 0.36 | 0.04 | 3.38 | 1.08 | 3.79 | 1.15 | 3.16 | 0.03 | 3.54 | 0.03 | At5g44680 | putative protein   |             | A_84_P11195   | RAFL15-15-G20               | RAFL15-15-G20               |
| AT5G22920.1                             | 1.82 | 0.04 | 1.89 | 0.05 | 0.54 | #### | 0.51 | 0.04 | 3.56 | 0    | 6.28 | 0.29 | 2.28 | 0.3  | 3.57 | 0.47 | At5g22920 | PGPD14 protein   |             | A_84_P10198   | RAFL08-09-P06               | RAFL08-09-P06               |
| AT1G09750.1                             | 0.6  | 0.03 | 0.41 | 0.01 | 0.32 | 0    | 0.24 | 0.03 | 1.79 | 0.3  | 5.44 | 1.19 | 3.03 | 0.37 | 3.79 | 0.51 | At1g09750 | expressed protein  |             | A_84_P22728   | RAFL04-13-J22               | RAFL04-13-J22               |
| AT4G27450.1                             | 0.85 | 0.12 | 0.97 | 0.22 | 0.09 |      | 0.14 | 0.02 | 4.47 | 0.76 | 16.6 | 1.52 | 1.85 | 0.16 | 11.9 | 2.95 | At4g27450 | putative protein   |             | A_84_P15742   | RAFL05-02-P09               | RAFL05-02-P09               |
| AT2G20670.1                             | 3.07 | 0.21 | 3.35 | 0.03 | 0.5  | 0.02 | 0.51 | 0    | 6.92 | 0.58 | 8.55 | 0.44 | 2.92 | 0.12 | 4.69 | 0.17 | At2g20670 | expressed protein  |             | A_84_P132645  | RAFL05-15-C08               | RAFL05-15-C08               |
| AT3G48360.1                             | 9.69 | 0.36 | 10.6 | 0.17 | 3.46 | 0.68 | 4.01 | 0    | 2.5  | 0.24 | 4.43 | 0.49 | 3.12 | 0.07 | 3.29 | 0.02 | At3g48360 | putative protein   | 1.14.--     | A_84_P21264   | RAFL07-16-B09               | RAFL07-16-B09               |
| AT2G34620.1                             | 1.15 | 0.01 | 1.04 | 0.02 | 0.14 | 0.03 | 0.18 | 0.03 | 1.65 | 0.01 | 4.28 | 0.33 | 4.21 | 0.92 | 3.53 | 0.49 | At2g34620 | hypothetical protein   |             | A_84_P98726   | RAFL15-13-E10               | RAFL15-13-E10               |
| AT1G62480.1                             | 1.3  | 0.14 | 1.24 | 0.04 | 0.59 | 0.12 | 0.29 | 0.05 | 1.18 | 0.38 | 3.6  | 1.13 | 1.1  | 0.03 | 4.33 | 0.66 | At1g62480 | expressed protein  |             | A_84_P23650   | RAFL05-15-C09               | RAFL05-15-C09               |
| AT5G53160.1                             | 1.05 | 0.14 | 1.27 | 0.04 | 0.82 | 0    | 0.97 | 0.29 | 1.55 | 0.24 | 3.55 | 0.67 | 0.9  | 0.44 | 3.02 | 0.83 | At5g53160 | putative protein   |             | A_84_P94069   | RAFL14-75-D10               | RAFL14-75-D10               |
| AT5G16030.1                             | 0.61 | 0.08 | 0.62 | 0.11 | 0.28 | 0    |      |      |      |      |      |      |      |      |      |      |           |  |             |               |                             |                             |



**Supplemental Table 1-6. Genes down-regulated in cold deacclimation process identified by 22K Agilent oligonucleotide array analysis)**

| Function                             | Gene        | Ratio(cold acclimation/Unstressed) <sup>2)</sup> |      |      |      |      |      | Ratio(cold deacclimation after 24hr cold acclimation) <sup>3)</sup> |      |      | Ratio(cold deacclimation after 168hr cold acclimation) <sup>3)</sup> |      |      | AGI code <sup>4)</sup> | Annotations <sup>5)</sup> | EC   | Probe ID <sup>6)</sup> | RAFL cDNA clone name <sup>7)</sup>                        | RAFL cDNA clone name <sup>8)</sup>                |             |               |                             |               |
|--------------------------------------|-------------|--|------|------|------|------|------|---|------|------|--|------|------|------------------------|---------------------------|------|------------------------|---|---|-------------|---------------|-----------------------------|---------------|
|                                      |             | 1hr  |      | 2hr  |      | 24hr |      | 1hr   |      | 5hr  |  | 1hr  |      |                        |                           |      |                        |   |   | 5hr         |               |                             |               |
|                                      |             | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.   | Std. | Av.  | Std.   | Av.  | Std. |                        |                           |      |                        |   |   | Av.         | Std.          |                             |               |
| <b>Regulatory proteins</b>           |             |  |      |      |      |      |      |   |      |      |  |      |      |                        |                           |      |                        |   |   |             |               |                             |               |
| <b>Nucleic Acids-related protein</b> |             |  |      |      |      |      |      |   |      |      |  |      |      |                        |                           |      |                        |   |   |             |               |                             |               |
|                                      | AT3G55580.1 | 1.31   | 0.3  | 3.36 | 3.44 | 24.9 | 4.2  | 8.27  | 1.11 | 0.51 | 0.09   | 0.05 | 0.03 | 0.36                   | 0.01                      | 0.1  | 0.01                   | At3g55580   | regulator of chromosome condensation-like protein | 6.3.4.2     | A_84_P17513   | RAFL04-12-N15               | RAFL04-12-N15 |
|                                      | AT4G25630.1 | 1.96   | 0.78 | 2.15 | 0.27 | 3.4  | 1.19 | 3.63  | 0.52 | 0.87 | 0.12   | 0.32 | 0.08 | 0.83                   | 0.07                      | 0.28 | 0.04                   | At4g25630   | fibrillarin 2 (AtFib2)                            |             | A_84_P18571   | RAFL05-08-H08               | RAFL05-08-H08 |
|                                      | AT3G07050.1 | 1.97   | 0.3  | 2.11 | 0.2  | 3.52 | 0.08 | 3.65  | 0.47 | 0.9  | 0  | 0.42 | 0.03 | 0.85                   | 0.02                      | 0.31 | 0.01                   | At3g07050   | putative GTPase                                   |             | A_84_P19279   | RAFL05-19-B03               | RAFL04-19-B03 |
|                                      | AT1G24530.1 | 1.39   | 0.03 | 1.58 | 0.26 | 2.23 | 0.27 | 3.6   | 0.06 | 0.79 | 0.03   | 0.42 | 0    | 0.36                   | 0.04                      | 0.3  | 0.01                   | At1g24530   | G-protein beta family                             |             | A_84_P11362   | RAFL05-19-N20               | RAFL05-19-N20 |
|                                      | AT3G12670.1 | 1.52   | 0.24 | 1.66 | 0.26 | 3.08 | 0.26 | 2.14  | 0.6  | 0.62 | 0.02   | 0.33 | 0.02 | 0.8                    | 0.13                      | 0.52 | 0.11                   | At3g12670   | CTP-synthetase, putative                          |             | A_84_P15563   | RAFL09-27-B09               | RAFL09-27-B09 |
|                                      | AT3G54400.1 | 0.91   | 0.1  | 0.89 | 0.15 | 4.29 | 0.09 | 1.28  | 0.32 | 0.96 | 0.1  | 0.26 | 0.03 | 0.87                   | 0.14                      | 0.67 | 0.15                   | At3g54400   | nucleoid DNA-binding - like protein               |             | A_84_P12781   | RAFL05-16-C09               | RAFL05-16-C09 |
|                                      | AT3G14890.1 | 1.02   | 0.03 | 0.83 | 0.05 | 4.6  | 1.08 | 2.17  | 0.07 | 1.33 | 0.15   | 0.2  | 0.03 | 0.88                   | 0.11                      | 0.44 | 0.05                   | At3g14890   | DNA nick sensor, putative                         |             | A_84_P21211   | RAFL05-16-C09               | RAFL14-97-C02 |
| <b>F-box protein</b>                 |             |  |      |      |      |      |      |   |      |      |  |      |      |                        |                           |      |                        |   |   |             |               |                             |               |
|                                      | AT1G68050.1 | 0.75   | 0.01 | 0.78 | 0.05 | 2.82 | 0.49 | 2.29  | 0.15 | 0.29 | 0.04   | 0.32 | 0.08 | 0.33                   | 0.02                      | 0.4  | 0.02                   | At1g68050   | F-box protein FKF1/ADO3, AIFBX2a                  |             | A_84_P11493   | RAFL07-18-B18               | RAFL07-18-B18 |
|                                      | AT1G12710.1 | 0.94   | 0.2  | 1.01 | 0.64 | 4.47 | 4.74 | 0.53  | 0.46 | 0.46 | 0.02   | 0.25 | 0.01 | 0.33                   | 0.02                      | 0.33 | 0.02                   | At1g12710   | hypothetical protein                              |             | A_84_P21910   | RAFL07-18-B18               | RAFL17-32-H22 |
| <b>Protein kinase</b>                |             |  |      |      |      |      |      |   |      |      |  |      |      |                        |                           |      |                        |   |   |             |               |                             |               |
|                                      | AT5G57630.1 | 0.8  | 0.08 | 1.12 | 0.32 | 3.07 | 0.71 | 3.48  | 0.47 | 0.47 | 0.09   | 0.35 | 0.06 | 0.25                   | 0.03                      | 0.42 | 0.06                   | At5g57630   | SNF1 related protein kinase-like protein          |             | A_84_P23535   | RAFL11-10-D21               | RAFL11-10-D21 |
|                                      | AT4G14580.1 | 0.6  | 0.01 | 0.87 | 0.08 | 2.36 | 0.06 | 2.15  | 0.12 | 0.32 | 0.01   | 0.22 | 0.02 | 0.28                   | 0.02                      | 0.24 | 0.01                   | At4g14580   | SNF1 like protein kinase                          |             | A_84_P12015   | RAFL05-16-G12               | RAFL05-16-G12 |
|                                      | AT1G78290.1 | 2.32   | 0    | 1.93 | 0.17 | 4.24 | 0.3  | 3.58  | 1.43 | 0.23 | 0.24   | 0.05 | 0.54 | 0.03                   | 0.29                      | 0.02 | At1g78290              | serine-threonine protein kinase, putative                 |   | A_84_P10505 | RAFL05-16-G12 | RAFL05-16-G12               |               |
|                                      | AT3G09830.1 | 0.82   | 0.09 | 0.96 | 0.13 | 3.5  | 0.13 | 2.39  | 0.49 | 0.78 | 0.07   | 0.28 | 0    | 0.57                   | 0.09                      | 0.36 | 0.04                   | At3g09830   | putative protein kinase                           |             | A_84_P21166   | RAFL05-16-K11               | RAFL05-16-K11 |
|                                      | AT5G25110.1 | 0.66   | 0.07 | 0.94 | 0.14 | 8.19 | 0.97 | 8.64  | 0.25 | 0.36 | 0.05   | 0.13 | 0.01 | 0.13                   | 0.01                      | 0.17 | 0.01                   | At5g25110   | serine/threonine protein kinase-like protein      |             | A_84_P21553   | RAFL05-16-K11               | RAFL05-16-K11 |
|                                      | AT3G23000.1 | 1.79   | 0.13 | 2.5  | 0    | 3.11 | 0.25 | 1.28  | 0.08 | 0.65 | 0.06   | 0.22 | 0.01 | 0.46                   | 0.01                      | 0.43 | 0.01                   | At3g23000   | SNF1 related protein kinase (ATSRPK1)             |             | A_84_P16470   | RAFL04-17-G24               | RAFL04-17-G24 |
|                                      | AT1G51805.1 | 0.97   | 1.14 | 0.06 | 1.02 | 0.06 | 1.14 | 0.09  | 0.74 | 0.06 | 0.3  | 0.02 | 0.57 | 0.05                   | 0.34                      | 0.01 | At1g51805              | receptor protein kinase, putative                         |   | A_84_P15117 | RAFL04-17-G24 | RAFL04-17-G24               |               |
| <b>Signaling</b>                     |             |  |      |      |      |      |      |   |      |      |  |      |      |                        |                           |      |                        |   |   |             |               |                             |               |
|                                      | AT5G07920.1 | 0.97   | 0.07 | 0.92 | 0.18 | 3.88 | 0.54 | 1.33  | 0.28 | 1    | 0.26   | 0.24 | 0.05 | 0.93                   | 0.02                      | 0.67 | 0.1                    | At5g07920   | diacylglycerol kinase (ATDGK1)                    | 2.7.1.107   | A_84_P18674   | RAFL16-04-D09               | RAFL16-04-D09 |
|                                      | AT5G49480.1 | 2.88   | 0.06 | 4.35 | 0.17 | 3.89 | 3.82 | 0.09  | 0.44 | 0.03 | 0.17   | 0.01 | 0.29 | 0.03                   | 0.24                      | 0.01 | At5g49480              | NaCl-inducible Ca2+-binding protein-like; calmodulin-like |   | A_84_P23507 | RAFL04-09-J20 | RAFL04-09-J20               |               |
| <b>Transcription factor</b>          |             |  |      |      |      |      |      |   |      |      |  |      |      |                        |                           |      |                        |   |   |             |               |                             |               |
|                                      | AT1G49720.1 | 0.22   | 0.01 | 0.7  | 0.16 | 7.57 | 1.56 | 3.64  | 0.26 | 0.26 | 0.04   | 0.09 | 0    | 0.15                   | 0.01                      | 0.17 | 0.02                   | At1g49720   | abscisic acid responsive elements-binding factor  |             | A_84_P164953  | RAFL09-41-C22               | RAFL09-41-C22 |
|                                      | AT2G28550.1 | 1.24   | 0.03 | 1.21 | 0.03 | 2.69 | 0.09 | 1.89  | 0.15 | 0.55 | 0.03   | 0.26 | 0.03 | 0.57                   | 0.07                      | 0.4  | 0.05                   | At2g28550   | AP2 domain protein RAP2.7                         |             | A_84_P10670   | RAFL08-11-H19               | RAFL08-11-H19 |
|                                      | AT2G31380.1 | 2.52   | 0.26 | 3.26 | 0.57 | 3.96 | 0.32 | 2.47  | 0.1  | 0.3  | 0.02   | 0.11 | 0.01 | 0.24                   | 0.06                      | 0.13 | 0.03                   | At2g31380   | salt tolerance-like protein                       |             | A_84_P12560   | RAFL05-07-H20,RAFL05-19-M20 | RAFL05-19-M20 |
|                                      | AT2G46830.1 | 2.41   | #### | 2.41 | 0.05 | 3.47 | 0.1  | 1.83  | 0.08 | 0.67 | 0.05   | 0.23 | 0.03 | 0.46                   | 0.01                      | 0.2  | 0.01                   | At2g46830   | MYB-related transcription factor (CCA1)           |             | A_84_P19241   | RAFL05-20-N17               | RAFL05-20-N17 |
|                                      | AT2G41900.1 | 1.39   | 0.1  | 1.38 | 0.1  | 2.99 | 0.23 | 2.23  | 0.29 | 0.72 | 0.02   | 0.32 | #### | 0.6                    | 0.06                      | 0.4  | 0.02                   | At2g41900   | putative CCHC-type zinc finger protein            |             | A_84_P21003   | RAFL05-02-C24               | RAFL05-02-C24 |
|                                      | AT5G15850.1 | 2.45   | 0.04 | 2.83 | 0.15 | 3.35 | 0.03 | 2.84  | 0.25 | 0.91 | 0.08   | 0.42 | 0.02 | 0.39                   | 0.02                      | 0.32 | 0.02                   | At5g15850   | Zinc finger protein CONSTANS-LIKE 1 (COL1)        |             | A_84_P16960   | RAFL05-19-G24               | RAFL05-19-G24 |
|                                      | AT4G25470.1 | 9.09   | 1.22 | 19   | 1.33 | 5.28 | 0.7  | 2.3   | 0.3  | 0.06 | 0.01   | 0.05 | 0    | 0.1                    | 0.04                      | 0.1  | 0                      | At4g25470   | DRE binding protein (DREB1C)                      |             | A_84_P19516   | RAFL16-61-B24               | RAFL16-61-B24 |
|                                      | AT3G24520.1 | 3.41   | 0.17 | 6.53 | 0.19 | 3.5  | 0.28 | 1.63  | 0.18 | 0.67 | 0.06   | 0.31 | 0.04 | 0.93                   | 0.18                      | 0.45 | 0.06                   | At3g24520   | heat shock transcription factor HSF1, putative    |             | A_84_P12676   | RAFL06-76-J16               | RAFL06-76-J16 |
|                                      | AT3G47500.1 | 1.15   | 0.05 | 1.41 | 0.1  | 1.18 | 0.18 | 1.18  | 0.04 | 0.44 | 0.09   | 0.46 | 0.13 | 0.28                   | 0.02                      | 0.28 | 0.01                   | At3g47500   | Dof zinc finger protein                           |             | A_84_P19369   | RAFL06-11-J09               | RAFL06-11-J09 |
|                                      | AT2G45660.1 | 0.76   | 0.09 | 0.86 | 0.01 | 3.06 | 0.65 | 2.4   | 0.02 | 1.21 | 0.19   | 0.3  | 0.02 | 0.8                    | 0.02                      | 0.31 | 0.01                   | At2g45660   | MADS-box protein (AGL20)                          |             | A_84_P22009   | RAFL05-05-A21               | RAFL05-05-A21 |
|                                      | AT5G61380.1 | 0.71   | 0.08 | 0.91 | 0.32 | 6.5  | 0.43 | 6.81  | 0.15 | 0.96 | 0.09   | 0.19 | 0    | 0.53                   | 0.07                      | 0.32 | 0                      | At5g61380   | pseudo-response regulator 1                       |             | A_84_P15984   | RAFL09-12-G02               | RAFL09-12-G02 |
|                                      | AT5G24470.1 | 0.42   | 0.02 | 3.09 | 0.29 | 10.8 | 0.43 | 7.3   | 0.04 | 0.18 | 0.02   | 0.07 | 0.05 | 0.07                   | 0.02                      | 0.06 | 0.01                   | At5g24470   | putative protein                                  |             | A_84_P16821   | RAFL09-68-P04               | RAFL09-68-P04 |
|                                      | AT2G23340.1 | 1.44   | 0.21 | 1.46 | 0.29 | 4.71 | 1.43 | 1.59  | 0.04 | 0.69 | 0.09   | 0.2  | 0.02 | 0.73                   | 0.02                      | 0.62 | 0.06                   | At2g23340   | putative AP2 domain transcription factor          |             | A_84_P11591   | RAFL19-73-B20               | RAFL19-73-B20 |
|                                      | AT5G04340.1 | 1.82   | 0.22 | 3.66 | 0.46 | 4.35 | 0.05 | 2.08  | 0.16 | 0.77 | 0.06   | 0.15 | 0.01 | 0.58                   | 0.01                      | 0.35 | 0.03                   | At5g04340   | putative c2h2 zinc finger transcription factor    |             | A_84_P17934   | RAFL21-19-J24               | RAFL21-19-J24 |
|                                      | AT2G47890.1 | 0.47   | 0.08 | 0.52 | 0.18 | 3.38 | 0.33 | 3.04  | 0.2  | 0.77 | 0.19   | 0.18 | 0.05 | 0.47                   | 0.05                      | 0.36 | 0.01                   | At2g47890   | CONSTANS B-box zinc finger family protein         |             | A_84_P13470   | RAFL19-22-F06               | RAFL19-22-F06 |
|                                      | AT5G54470.1 | 1.63   | 0.13 | 4.13 | 0.21 | 3.08 | 0.09 | 1.94  | 0.18 | 0.15 | 0  | 0.14 | 0    | 0.22                   | 0.1                       | 0.12 | 0.01                   | At5g54470   | CONSTANS B-box zinc finger family protein         |             | A_84_P242573  | RAFL11-03-L10               | RAFL11-03-L10 |
|                                      | AT5G37260.1 | 23.3   | 0.55 | 36.7 | 8.24 | 21.6 | 3.57 | 29.9  | 3.76 | 0.16 | 0.04   | 0.16 | 0.04 | 0.09                   | 0                         | 0.16 | 0.01                   | At5g37260   | putative protein                                  |             | A_84_P14948   | RAFL11-03-L10               | RAFL11-03-L10 |
|                                      | AT4G27310.1 | 1.36   | 0.09 | 1.93 | 0.09 | 1.85 | 0.25 | 1.18  | 0.01 | 0.24 | 0.02   | 0.41 | 0.05 | 0.09                   | 0.02                      | 0.29 | 0.02                   | At4g27310   | CONSTANS B-box zinc finger family protein         |             | A_84_P19525   | RAFL05-03-H05               | RAFL05-03-H05 |
|                                      | AT1G13260.1 | 1.84   | 0.35 | 2.93 | 0.48 | 4.48 | 0.85 | 2.85  | 0.36 | 0.53 | 0.07   | 0.18 | 0.02 | 0.3                    | 0.07                      | 0.29 | 0.05                   | At1g13260   | DNA-binding protein (RAV1)                        |             | A_84_P13235   | RAFL06-79-P13               | RAFL06-79-P13 |
|                                      | AT3G50260.1 | 0.87   | 0.21 | 1.21 | 0.26 | 5.71 | 0.34 | 2.32  | 0.3  | 1.3  | 0.02   | 0.25 | 0.01 | 0.79                   | 0.1                       | 0.57 | 0.12                   | At3g50260   | putative protein                                  |             | A_84_P23164   | RAFL05-14-O11               | RAFL05-14-O11 |
|                                      | AT1G27730.1 | 3.05   | 0.09 | 7.1  | 0.13 | 1.61 | 0.07 | 1.11  | 0.05 | 0.57 | 0.02   | 0.18 | 0.02 | 0.55                   | 0                         | 0.33 | 0.04                   | At1g27730   | salt-tolerance zinc finger protein                |             | A_84_P21874   | RAFL04-15-K19               | RAFL04-15-K19 |
|                                      | AT1G71030.1 | 0.4  | 0.01 | 0.34 | 0.01 | 0.76 | 0.17 | 0.54  | 0.03 | 0.67 | 0.15   | 0.7  | 0.2  | 0.17                   | 0.02                      | 0.4  | 0.01                   | At1g71030   | myb family transcription factor                   |             | A_84_P12444   | RAFL05-15-F19               | RAFL05-15-F19 |
|                                      | AT4G29190.1 | 1.09   | 0.25 | 2.02 | 0.66 | 3.74 | 0.71 | 2.53  | 0.14 | 0.35 | 0.05   | 0.22 | 0.04 | 0.25                   | 0.08                      | 0.27 | 0.1                    | At4g29190   | putative protein                                  |             | A_84_P11024   | RAFL05-19-O11               | RAFL05-19-O11 |
|                                      | AT3G02380.1 | 4.99   | 0.03 | 5.91 | 0.1  | 2.14 | 0.05 | 3.27  | 0.19 | 0.42 | 0  | 0.25 | 0.01 | 0.14                   | ####                      | 0.12 | 0.01                   | At3g02380   | Zinc finger protein CONSTANS-LIKE 2 (COL2)        |             | A_84_P20298   | RAFL05-07-N04               | RAFL05-07-N04 |
|                                      | AT5G17300.1 | 4.64   | 0.65 | 7.77 | 0.75 | 7.06 | 2.54 | 4.04  | 0.4  | 0.41 | 0.02   | 0.21 | 0.01 | 0.23                   | 0                         | 0.21 | 0.04                   | At5g17300   | expressed protein                                 |             | A_84_P161503  | RAFL04-09-B07,RAFL11-05-P15 | RAFL04-09-B07 |
|                                      | AT3G07650.1 | 0.9  | 0.09 | 1.42 | 0.47 | 5.49 | 2.23 | 4.43  | 0.04 | 0.48 | 0.07   | 0.35 | 0.04 | 0.25                   | 0.04                      | 0.55 | 0.01                   | At3g07650   | CONSTANS B-box zinc finger family protein         |             | A_84_P13573   | RAFL04-20-N21               | RAFL04-20-N21 |
|                                      | AT3G45260.1 | 0.55   | 0.08 | 0.6  |      |      |      |   |      |      |  |      |      |                        |                           |      |                        |   |   |             |               |                             |               |





Supplemental Table 1-7. Cold acclimation up-regulated genes identified by 22K Agilent oligonucleotide array analysis)

| Fun Gene                             | Ratio(cold acclimation/Unstressed) |      |      |      |      |      | Ratio(cold deacclimation after 24hr cold acclimation/24hr cold acclimation) |      |     | Ratio(cold deacclimation after 168hr cold acclimation/168hr cold acclimation) |     |      | EC  | Probe ID <sup>6)</sup> | RAFL cDNA clone name <sup>7)</sup> | RAFL cDNA clone name <sup>8)</sup> |                        |   |              |                             |               |
|--------------------------------------|------------------------------------|------|------|------|------|------|---|------|-----|---|-----|------|-----|------------------------|------------------------------------|------------------------------------|------------------------|---|--------------|-----------------------------|---------------|
|                                      | 1hr                                |      | 2hr  |      | 24hr |      | 1hr   |      | 5hr |   | 1hr |      |     |                        |                                    |                                    | AGI code <sup>4)</sup> | Annotations <sup>5)</sup>                                 |              |                             |               |
|                                      | Av.                                | Std. | Av.  | Std. | Av.  | Std. | Av.   | Std. | Av. | Std.  | Av. | Std. |     |                        |                                    |                                    |                        |   |              |                             |               |
| <b>Regulatory proteins</b>           |                                    |      |      |      |      |      |   |      |     |   |     |      |     |                        |                                    |                                    |                        |   |              |                             |               |
| <b>Nucleic Acids-related protein</b> |                                    |      |      |      |      |      |   |      |     |   |     |      |     |                        |                                    |                                    |                        |   |              |                             |               |
| AT3G54400.1                          | 0.91                               | 0.1  | 0.89 | 0.15 | 4.29 | 0.09 | 1.28  | 0.32 | 1   | 0.1   | 0.3 | 0    | 0.9 | 0.1                    | 0.7                                | 0.1                                | AT3G54400              | nucleoid DNA-binding - like protein                       | A_84_P12781  | RAFL05-16-C09               | RAFL05-16-C09 |
| AT3G55580.1                          | 1.31                               | 0.3  | 3.36 | 3.44 | 24.9 | 4.2  | 8.27  | 1.11 | 0.5 | 0.1   | 0.1 | 0    | 0.4 | 0.1                    | 0                                  | 0                                  | AT3G55580              | regulator of chromosome condensation-like protein         | A_84_P17513  | RAFL04-12-N15               | RAFL04-12-N15 |
| AT4G25630.1                          | 1.96                               | 0.78 | 2.15 | 0.27 | 3.4  | 1.19 | 3.63  | 0.52 | 0.9 | 0.1   | 0.3 | 0.1  | 0.8 | 0.1                    | 0.3                                | 0                                  | AT4G25630              | fibrillarin 2 (AtFib2)                                    | A_84_P18571  | RAFL05-08-H08               | RAFL05-08-H08 |
| AT3G07050.1                          | 1.97                               | 0.3  | 2.11 | 0.2  | 3.52 | 0.08 | 3.65  | 0.47 | 0.9 | 0.4   | 0.4 | 0    | 0.8 | 0.3                    | 0                                  | 0                                  | AT3G07050              | putative GTPase   | A_84_P19279  |                             | RAFL04-19-B13 |
| AT3G14890.1                          | 1.02                               | 0.03 | 0.83 | 0.05 | 4.6  | 1.08 | 2.17  | 0.07 | 1.3 | 0.1   | 0.2 | 0    | 0.9 | 0.1                    | 0.4                                | 0                                  | AT3G14890              | DNA nick sensor, putative                                 | A_84_P21211  |                             | RAFL14-97-O22 |
| AT3G12670.1                          | 1.52                               | 0.24 | 1.66 | 0.26 | 3.08 | 0.26 | 2.14  | 0.6  | 0.6 | 0.1   | 0.5 | 0    | 0.8 | 0.1                    | 0.5                                | 0                                  | AT3G12670              | CTP-synthetase, putative                                  | A_84_P15563  |                             | RAFL05-27-B09 |
| AT5G08620.1                          | 1.63                               | 0.76 | 1.75 | 0.07 | 3.46 | 1.23 | 2.65  | 0.45 | 1   | 0.1   | 0.8 | 0.1  | 0.9 | 0.3                    | 0.6                                | 0.1                                | AT5G08620              | DEAD/DEAH box RNA helicase, putative                      | A_84_P11113  | RAFL09-17-O21               | RAFL09-17-O21 |
| <b>F-box protein</b>                 |                                    |      |      |      |      |      |   |      |     |   |     |      |     |                        |                                    |                                    |                        |   |              |                             |               |
| AT1G12710.1                          | 0.94                               | 0.2  | 1.01 | 0.64 | 4.47 | 4.74 | 0.53  | 0.5  | 0.5 | 0.2   | 0   | 0    | 0.3 | 0.3                    | 0                                  | 0                                  | AT1G12710              | hypothetical protein                                      | A_84_P21910  |                             | RAFL17-32-H22 |
| AT3G61060.1                          | 1.09                               | 0.18 | 1    | 0.2  | 4.07 | 0.9  | 2.6   | 0.4  | 2   | 0.3   | 0.4 | 0    | 0.4 | 0.1                    | 0.4                                | 0.1                                | AT3G61060              | putative protein  | A_84_P28777  | RAFL05-08-B11               | RAFL05-08-B11 |
| <b>Protein kinase</b>                |                                    |      |      |      |      |      |   |      |     |   |     |      |     |                        |                                    |                                    |                        |   |              |                             |               |
| AT5G57630.1                          | 0.8                                | 0.08 | 1.12 | 0.32 | 3.07 | 0.71 | 3.48  | 0.47 | 0.5 | 0.1   | 0.4 | 0.1  | 0.2 | 0                      | 0.4                                | 0.1                                | AT5G57630              | SNF1 related protein kinase-like protein                  | A_84_P23535  | RAFL11-10-D21               | RAFL11-10-D21 |
| AT1G78290.1                          | 2.32                               | 0    | 1.93 | 0.17 | 4.24 | 0.3  | 3.58  | 1.4  | 1.4 | 0.2   | 0.2 | 0.1  | 0.5 | 0.3                    | 0                                  | 0                                  | AT1G78290              | serine-threonine protein kinase, putative                 | A_84_P10505  | RAFL05-16-G12               | RAFL05-16-G12 |
| AT2G28930.1                          | 0.87                               | 0.02 | 0.88 | 0.04 | 3.13 | 0.23 | 2   | 0.04 | 0.9 | 0.4   | 0.4 | 0    | 0.5 | 0.1                    | 0.5                                | 0                                  | AT2G28930              | putative protein kinase                                   | A_84_P13563  |                             | RAFL19-82-M09 |
| AT3G59350.1                          | 1.03                               | 0.05 | 1.33 | 0.05 | 4.11 | 0.04 | 1.99  | 0.35 | 0.9 | 0.4   | 0.4 | 0    | 0.7 | 0.9                    | 0.1                                | 0                                  | AT3G59350              | protein kinase-like protein                               | A_84_P13746  | RAFL05-14-A21               | RAFL05-14-A21 |
| AT3G09830.1                          | 0.82                               | 0.09 | 0.96 | 0.13 | 3.5  | 0.13 | 2.39  | 0.49 | 0.8 | 0.1   | 0.3 | 0    | 0.6 | 0.1                    | 0.4                                | 0                                  | AT3G09830              | putative protein kinase                                   | A_84_P21166  |                             | RAFL09-93-I22 |
| AT5G01810.1                          | 2.29                               | 0.06 | 2.45 | 0.04 | 2.26 | 0.06 | 4.25  | 0.08 | 1.1 | 0.1   | 0.8 | 0.1  | 0.8 | 0.6                    | 0                                  | 0                                  | AT5G01810              | serine/threonine protein kinase ATPK10                    | A_84_P12978  |                             | RAFL16-20-K01 |
| AT5G21101.1                          | 0.68                               | 0.07 | 0.84 | 0.18 | 8.19 | 0.92 | 2.68  | 0.25 | 0.4 | 0.1   | 0.2 | 0    | 0.1 | 0.1                    | 0.2                                | 0                                  | AT5G21101              | serine/threonine protein kinase-like protein              | A_84_P21533  | RAFL05-16-K11               | RAFL05-16-K11 |
| AT5G5450.1                           | 0.77                               | 0.24 | 0.77 | 0.25 | 2.53 | 0.26 | 3.67  | 0.68 | 0.9 | 0.1   | 0.6 | 0.1  | 0.6 | 0.1                    | 0.5                                | 0.1                                | AT5G5450               | serine/threonine-specific protein kinase-like             | A_84_P23188  | RAFL05-11-G12               | RAFL05-11-G12 |
| AT3G61160.1                          | 0.56                               | 0.03 | 0.56 | 0.09 | 1.06 | 0.06 | 3.55  | 0    | 1.2 | 0.1   | 0.5 | 0.1  | 0.5 | 0.7                    | 0                                  | 0                                  | AT3G61160              | shaggy-like kinase beta                                   | A_84_P19427  |                             | RAFL16-58-N02 |
| AT3G23000.1                          | 1.79                               | 0.13 | 2.5  | 0    | 3.11 | 0.25 | 1.28  | 0.08 | 0.7 | 0.1   | 0.2 | 0    | 0.5 | 0.4                    | 0                                  | 0                                  | AT3G23000              | SNF1 related protein kinase (ATSRPK1)                     | A_84_P16470  | RAFL04-17-G24               | RAFL04-17-G24 |
| AT1G01140.1                          | 1.36                               | 0.05 | 2    | 0.08 | 3.58 | 0.63 | 1.74  | 0.09 | 1   | 0.1   | 0.3 | 0    | 0.7 | 0.8                    | 0                                  | 0                                  | AT1G01140              | serine threonine kinase, putative                         | A_84_P23981  | RAFL04-16-A16               | RAFL04-16-A16 |
| <b>Signaling</b>                     |                                    |      |      |      |      |      |   |      |     |   |     |      |     |                        |                                    |                                    |                        |   |              |                             |               |
| AT5G49480.1                          | 2.88                               | 0.06 | 4.35 | 0.17 | 3.89 | 3.82 | 0.09  | 0.4  | 0.4 | 0.2   | 0   | 0    | 0.3 | 0.2                    | 0                                  | 0                                  | AT5G49480              | NaCl-inducible Ca2+-binding protein-like; calmodulin-like | A_84_P23507  | RAFL04-09-J20               | RAFL04-09-J20 |
| AT2G33380.1                          | 2.86                               | 0.09 | 3.24 | 0.07 | 1.11 | 0.33 | 0.51  | 0.07 | 1   | 0.3   | 0.3 | 0.1  | 1.3 | 0.1                    | 0.8                                | 0.1                                | AT2G33380              | RD20 protein  | A_84_P21026  | RAFL08-16-M12               | RAFL08-16-M12 |
| AT2G43290.1                          | 2.51                               | 0.17 | 4.57 | 0.08 | 1.8  | 0.61 | 2.38  | 0.49 | 1   | 0.3   | 0.6 | 0.2  | 0.8 | 0.2                    | 0.4                                | 0.1                                | AT2G43290              | putative calcium binding protein                          | A_84_P16283  | RAFL06-08-B14               | RAFL06-08-B14 |
| AT3G57040.1                          | 2.59                               | 0.01 | 3.09 | 0.1  | 0.93 | 0.18 | 0.67  | 0.11 | 1.8 | 0.4   | 1.1 | 0.2  | 1.4 | 0.1                    | 1.1                                | 0.1                                | AT3G57040              | response rector 4   | A_84_P17519  |                             | RAFL09-22-A14 |
| AT1G43890.1                          | 0.86                               | 0.05 | 0.87 | 0.11 | 3.62 | 0.31 | 2.18  | 0.02 | 1.3 | 0.4   | 0.4 | 0    | 0.7 | 0.6                    | 0                                  | 0                                  | AT1G43890              | GTP-binding protein(RAB1Y), putative                      | A_84_P18596  | RAFL04-13-K15               | RAFL04-13-K15 |
| AT1G24530.1                          | 1.39                               | 0.03 | 1.58 | 0.26 | 2.23 | 0.27 | 3.6   | 1.06 | 0.8 | 0.4   | 0.4 | 0    | 0.4 | 0.3                    | 0                                  | 0                                  | AT1G24530              | G-protein beta family                                     | A_84_P11362  | RAFL05-19-N20               | RAFL05-19-N20 |
| AT4G16563.1                          | 0.63                               | 0.06 | 0.84 | ###  | 2.37 | 0.53 | 3.72  | 0.68 | 1   | 0   | 0.6 | 0    | 0.8 | 0.1                    | 0.7                                | 0.1                                | AT4G16563              | similar to chloroplast nucleoid DNA-binding protein-like  | A_84_P133775 |                             |               |
| AT5G07920.1                          | 0.97                               | 0.07 | 0.92 | 0.18 | 3.88 | 0.54 | 1.33  | 0.28 | 1   | 0.3   | 0.2 | 0    | 0.9 | 0.7                    | 0.1                                | 0                                  | AT5G07920              | diacylglycerol kinase (ATDGK1)                            | A_84_P18674  |                             | RAFL16-04-D09 |
| <b>Transcription factor</b>          |                                    |      |      |      |      |      |   |      |     |   |     |      |     |                        |                                    |                                    |                        |   |              |                             |               |
| AT1G49720.1                          | 0.22                               | 0.01 | 0.7  | 0.16 | 7.57 | 1.56 | 3.64  | 0.26 | 0.3 | 0.1   | 0   | 0    | 0.1 | 0                      | 0.2                                | 0                                  | AT1G49720              | abscisic acid responsive elements-binding factor          | A_84_P164953 |                             | RAFL09-41-C22 |
| AT5G51990.1                          | 1.3                                | 0.03 | 5.1  | 0.12 | 1.12 | 0.04 | 1.1   | 0.02 | 0.9 | 0.1   | 0.9 | 0.1  | 0.9 | 0.8                    | 0                                  | 0                                  | AT5G51990              | DRE binding protein                                       | A_84_P23516  |                             |               |
| AT2G31380.1                          | 2.52                               | 0.26 | 3.26 | 0.57 | 3.96 | 0.32 | 2.47  | 0.1  | 0.3 | 0.1   | 0.1 | 0    | 0.2 | 0.1                    | 0.1                                | 0                                  | AT2G31380              | salt tolerance-like protein                               | A_84_P12560  | RAFL05-07-H20,RAFL05-19-M20 | RAFL05-19-M20 |
| AT2G46830.1                          | 2.41                               | ###  | 2.41 | 0.05 | 3.47 | 0.1  | 1.83  | 0.08 | 0.7 | 0.2   | 0.2 | 0    | 0.5 | 0.2                    | 0                                  | 0                                  | AT2G46830              | MYB-related transcription factor (CCA1)                   | A_84_P19241  | RAFL05-20-N17               | RAFL05-20-N17 |
| AT5G15850.1                          | 2.45                               | 0.04 | 2.83 | 0.15 | 3.35 | 0.03 | 2.84  | 0.25 | 0.9 | 0.1   | 0.4 | 0    | 0.4 | 0.3                    | 0                                  | 0                                  | AT5G15850              | Zinc finger protein CONSTANS-LIKE 1 (COL1)                | A_84_P16990  | RAFL05-19-G24               | RAFL05-19-G24 |
| AT3G17600.1                          | 1.84                               | 0.22 | 3.66 | 0.34 | 4.35 | 0.26 | 3.08  | 0.16 | 0.8 | 0.1   | 0.1 | 0    | 0.6 | 0.4                    | 0                                  | 0                                  | AT3G17600              | putative c2h2 zinc finger protein-like                    | A_84_P21533  | RAFL05-09-H09               | RAFL05-09-H09 |
| AT4G25470.1                          | 9.09                               | 1.22 | 19   | 1.33 | 5.28 | 0.7  | 2.3   | 0.3  | 0.1 | 0.1   | 0.1 | 0    | 0.1 | 0.1                    | 0                                  | 0                                  | AT4G25470              | DRE binding protein (DREB1C)                              | A_84_P19516  |                             | RAFL16-61-B06 |
| AT5G05410.1                          | 0.61                               | 0.15 | 1.95 | 0.03 | 3.2  | 0.39 | 1.51  | 0.32 | 0.6 | 0.1   | 0.4 | 0.1  | 2   | 0.3                    | 0.8                                | 0.2                                | AT5G05410              | DRE binding protein (DREB2A)                              | A_84_P21501  | DREB-2A                     | RAFL06-69-L18 |
| AT5G47230.1                          | 2.36                               | 0.38 | 3.4  | 0.28 | 1.46 | 0.21 | 0.87  | 0.12 | 0.5 | 0.4   | 0.1 | 0.1  | 0.7 | 0.1                    | 0.6                                | 0.1                                | AT5G47230              | ethylene responsive element binding factor 5 (AtERF5)     | A_84_P15931  |                             | RAFL17-21-N19 |
| AT4G18880.1                          | 1.3                                | 0.08 | 3.13 | 0.15 | 1.25 | 0.04 | 1.66  | 0.23 | 0.9 | 0.1   | 0.6 | 0    | 0.7 | 0.1                    | 0.6                                | 0.1                                | AT4G18880              | heat shock transcription factor - like protein            | A_84_P17597  | RAFL06-15-C03               | RAFL06-15-C03 |
| AT3G24520.1                          | 3.41                               | 0.17 | 6.53 | 0.19 | 3.5  | 0.28 | 1.63  | 0.18 | 0.7 | 0.1   | 0.3 | 0    | 0.9 | 0.2                    | 0.4                                | 0.1                                | AT3G24520              | heat shock transcription factor HSF1, putative            | A_84_P12676  |                             | RAFL06-76-J16 |
| AT5G47370.1                          | 2.51                               | 0.23 | 4.51 | 0.08 | 1.45 | 0.32 | 0.97  | 0.31 | 1.1 | 0.3   | 1.3 | 0.4  | 0.9 | 0.3                    | 1.1                                | 0.4                                | AT5G47370              | homeobox-leucine zipper protein-like                      | A_84_P13096  |                             | RAFL06-72-J19 |
| AT2G45860.1                          | 0.76                               | 0.09 | 0.86 | 0.01 | 3.06 | 0.65 | 2.4   | 0.02 | 1.2 | 0.2   | 0.3 | 0    | 0.8 | 0.2                    | 0.3                                | 0                                  | AT2G45860              | MADS-box protein (AGL20)                                  | A_84_P22033  | RAFL08-10-C13,RAFL08-10-C12 | RAFL08-10-C13 |
| AT1G74840.1                          | 1.37                               | 0.05 | 1.36 | 0    | 3.37 | 0.34 | 2.31  | 0.09 | 1.1 | 0   | 0.4 | 0    | 0.6 | 0.5                    | 0                                  | 0                                  | AT1G74840              | myb family transcription factor                           | A_84_P23758  |                             | RAFL06-66-J21 |
| AT4G37260.1                          | 1.47                               | 0.07 | 2.18 | 0.06 | 3.26 | 0.34 | 2.7   | 0.23 | 0.7 | 0.1   | 0.8 | 0.1  | 0.7 | 0.1                    | 0.8                                | 0.1                                | AT4G37260              | myb DNA-binding protein (AtMYB73)                         | A_84_P14864  | RAFL08-15-B15               | RAFL08-15-B15 |
| AT5G61380.1                          | 0.71                               | 0.08 | 0.91 | 0.32 | 6.5  | 0.43 | 6.81  | 0.15 | 1   | 0.1   | 0.2 | 0    | 0.5 | 0.1                    | 0.3                                | 0                                  | AT5G61380              | pseudo-response regulator 1                               | A_84_P15984  | RAFL09-12-G02               | RAFL09-12-G02 |
| AT5G24470.1                          | 0.42                               | 0.02 | 3.09 | 0.29 | 10.8 | 0.43 | 7.3   | 0.04 | 0.2 | 0.1   | 0.1 | 0.1  | 0.1 | 0.1                    | 0.1                                | 0                                  | AT5G24470              | putative protein  | A_84_P16821  |                             | RAFL09-68-P04 |
| AT2G23440.1                          | 1.44                               | 0.21 | 1.46 | 0.29 | 4.71 | 1.43 | 1.59  | 0.04 | 0.7 | 0.1   | 0.2 | 0    | 0.7 | 0.6                    | 0.1                                | 0                                  | AT2G23440              | putative AP2 domain transcription factor                  | A_84_P11591  |                             | RAFL19-73-B20 |
| AT1G04240.1                          | 1.7                                | 0.18 | 2.15 | 0.09 | 4.23 | 1.03 | 1.69  | 0.36 | 1.7 | 0.1   | 0.7 | 0.1  | 1.2 | 0.3                    | 0.9                                | 0.2                                | AT1G04240              | putative auxin-induced protein AUX2-11                    | A_84_P21812  | RAFL07-08-I17               | RAFL07-08-I17 |
| AT1G68520.1                          | 3.33                               | 0.6  | 4    | 0.34 | 2.86 | 0.04 | 3.92  | 0.37 | 0.6 | 0.1   | 0.8 | 0.1  | 0.8 | 0.2                    | 0.8                                | 0.2                                | AT1G68520              | CONSTANS B-box zinc finger family protein                 | A_84_P23779  | RAFL05-13-F19               | RAFL05-13-F19 |
| AT5G04340.1                          | 1.82                               | 0.22 | 3.66 | 0.46 | 4.35 | 0.26 | 3.08  | 0.16 | 0.8 | 0.1   | 0.1 | 0    | 0.6 | 0.4                    | 0                                  | 0                                  | AT5G04340              | putative c2h2 zinc finger transcription factor            | A_84_P17934  |                             | RAFL21-19-J24 |
| AT2G40140.1                          |                                    |      |      |      |      |      |   |      |     |   |     |      |     |                        |                                    |                                    |                        |   |              |                             |               |





Supplemental Table 1-8. Genes down-regulated in the process of cold acclimation identified by 22K Agilent oligonucleotide array analysis 1)

| Functional Gene                                | Ratio(cold acclimation/Unstressed) <sub>2</sub> |       |       |       |       |       | Ratio(cold deacclimation after 24hr cold acclimation) <sub>3</sub> |       |      |       | Ratio(cold deacclimation after 168hr cold acclimation) <sub>3</sub> |      |      |       | EC   | Probe ID(s) | RAFL cDNA clone name <sub>7</sub> | RAFL cDNA clone name <sub>8</sub>   |              |                             |                             |
|--|---|-------|-------|-------|-------|-------|--|-------|------|-------|---|------|------|-------|------|-------------|-----------------------------------|---|--------------|-----------------------------|-----------------------------|
|  | 1hr   |       | 2hr   |       | 24hr  |       | 1hr  |       | 5hr  |       | 1hr   |      | 5hr  |       |      |             |                                   |   |              |                             |                             |
|  | Av.   | Std.  | Av.   | Std.  | Av.   | Std.  | Av.  | Std.  | Av.  | Std.  | Av.   | Std. | Av.  | Std.  |      |             |                                   |   |              |                             |                             |
| <b>Regulatory proteins</b>                     |   |       |       |       |       |       |  |       |      |       |   |      |      |       |      |             |                                   |   |              |                             |                             |
| <b>Nucleic Acids-related protein</b>           |   |       |       |       |       |       |  |       |      |       |   |      |      |       |      |             |                                   |   |              |                             |                             |
| AT1G23860.1                                    | 0.95  | 0.038 | 0.775 | 0.002 | 0.384 | 0.072 | 0.269  | 0.059 | 1.22 | 0.32  | 2.32  | 0.42 | 1.49 | 0.43  | 2.81 | 0.77        | At1g23860                         | splicing factor SRZ_21  | A_84_P130206 | RAFL05-12-O10               | RAFL05-12-O10               |
| AT1G09140.2                                    | 1.325   | 0.002 | 1.162 | 0.036 | 0.361 | 0.058 | 0.326  | 0.028 | 1.4  | 0.21  | 2.3   | 0.49 | 1.39 | 0.25  | 3.12 | 0.48        | At1g09140                         | arginine/serine-rich splicing factor, atSRp30   | A_84_P217458 | RAFL05-12-O05,RAFL16-56-K16 | RAFL05-12-O05,RAFL16-56-K16 |
| AT1G06760.1                                    | 0.649   | 0.01  | 0.556 | 0.022 | 0.439 | 0.04  | 0.3  | 0.004 | 3.14 | 0.34  | 2.37  | 0.13 | 1.87 | 0.01  | 3.04 | 0.1         | At1g06760                         | histone H1, putative  | A_84_P222322 | RAFL05-16-P20,RAFL14-83-K09 | RAFL05-16-P20,RAFL14-83-K09 |
| AT2G18050.1                                    | 0.437   | 0.08  | 0.621 | 0.013 | 0.308 | 0.019 | 0.553  | 0.177 | 2.35 | 0.13  | 6.29  | 1.27 | 1.38 | 0.38  | 2.1  | 0.54        | At2g18050                         | histone H1  | A_84_P15441  | RAFL05-20-P13               | RAFL05-20-P13               |
| <b>Protein kinase</b>                          |   |       |       |       |       |       |  |       |      |       |   |      |      |       |      |             |                                   |   |              |                             |                             |
| AT5G66880.1                                    | 0.37  | ##### | 0.416 | 0.024 | 0.269 | 0.015 | 0.358  | 0.06  | 1.79 | 0.13  | 4   | 0.44 | 1.52 | 0.04  | 2.81 | 0.35        | At5g66880                         | protein kinase, 41K (EC 2.7.1.-) (pir)[S17172]  | A_84_P16007  | RAFL06-89-M02               | RAFL06-89-M02               |
| AT2G32300.1                                    | 0.251   | 0.045 | 0.236 | 0.051 | 1.083 | 0.095 | 1.584  | 0.27  | 1.03 | 0.02  | 1.26  | 0.02 | 0.96 | 0.15  | 1.02 | 0.19        | At2g32300                         | putative protein kinase   | A_84_P12575  | RAFL14-60-M16               | RAFL14-60-M16               |
| <b>Signaling</b>                               |   |       |       |       |       |       |  |       |      |       |   |      |      |       |      |             |                                   |   |              |                             |                             |
| AT2G41090.1                                    | 0.9   | 0.109 | 1.023 | 0.115 | 0.194 | 0.024 | 0.517  | 0.137 | 0.68 | 0.12  | 1.87  | 0.26 | 1.13 | 0.28  | 2.02 | 0.47        | At2g41090                         | calcium binding protein (CaBP-22)   | A_84_P10706  | RAFL07-08-J03               | RAFL07-08-J03               |
| <b>Transcription factor</b>                    |   |       |       |       |       |       |  |       |      |       |   |      |      |       |      |             |                                   |   |              |                             |                             |
| AT1G49720.1                                    | 0.216   | 0.008 | 0.7   | 0.158 | 7.567 | 1.563 | 3.638  | 0.26  | 0.26 | 0.04  | 0.09  | 0    | 0.15 | 0.01  | 0.17 | 0.02        | At1g49720                         | abscisic acid responsive elements-binding factor  | A_84_P164953 | RAFL09-41-C22               | RAFL09-41-C22               |
| AT3G24500.1                                    | 0.964   | 0.07  | 1.38  | 0.081 | 0.284 | 0.012 | 0.286  | 0.054 | 3.77 | 0.63  | 4.52  | 0.78 | 10.3 | 0.36  | 4.98 | 0.6         | At3g24500                         | ethylene-responsive transcriptional coactivator, putative                                 | A_84_P11731  | RAFL14-50-M16               | RAFL14-50-M16               |
| AT1G73870.1                                    | 1.307   | 0.128 | 1.811 | 0.118 | 0.323 | 0.022 | 0.555  | 0.174 | 0.61 | 0.13  | 0.95  | 0.17 | 0.69 | 0.13  | 0.51 | 0.13        | At1g73870                         | CONSTANS B-box zinc finger family protein   | A_84_P235073 | RAFL05-03-B20               | RAFL05-03-B20               |
| AT5G60890.1                                    | 0.837   | 0.009 | 1.167 | 0.123 | 0.261 | 0.011 | 0.273  | 0.045 | 1.16 | 0.12  | 2.26  | 0.13 | 1.25 | 0.15  | 1.33 | 0.13        | At5g60890                         | receptor-like protein kinase(ATR1), putative  | A_84_P14091  | RAFL14-02-G07               | RAFL14-02-G07               |
| AT5G65640.1                                    | 0.785   | 0.024 | 1.051 | 0.04  | 0.255 | 0.103 | 0.645  | 0.117 | 1.73 | 0.15  | 3.39  | 0.01 | 1.11 | 0.11  | 2.06 | 0.24        | At5g65640                         | bHLH protein  | A_84_P50370  | RAFL16-31-H19               | RAFL16-31-H19               |
| AT1G32640.1                                    | 1.08  | 0.093 | 1.771 | 0.175 | 0.279 | 0.006 | 0.351  | 0.065 | 1.26 | 0.08  | 2.06  | 0.11 | 1.2  | 0.16  | 1.47 | 0.27        | At1g32640                         | bHLH protein (RAP-1)  | A_84_P17140  | RAFL02-08-M10,RD22-BP1      | RAFL02-08-M10,RAFL02-08-M10 |
| AT2G43010.1                                    | 0.448   | 0.013 | 0.422 | 0.011 | 0.239 | 0.047 | 0.313  | 0.012 | 1.49 | 0.22  | 4.43  | 0.68 | 1.42 | 0.05  | 2.51 | 0.16        | At2g43010                         | expressed protein   | A_84_P162993 | RAFL09-15-L21               | RAFL09-15-L21               |
| AT2G33810.1                                    | 0.728   | 0.013 | 0.616 | 0.046 | 0.408 | 0.008 | 0.329  | 0.044 | 1.27 | 0.06  | 2.6   | 0.02 | 1.08 | 0.25  | 1.86 | 0.28        | At2g33810                         | putative squamosa-promoter binding protein  | A_84_P11678  | RAFL19-50-A02               | RAFL19-50-A02               |
| AT3G10040.1                                    | 1.014   | 0.2   | 0.919 | 0.083 | 0.101 | 0.031 | 0.151  | 0.014 | 2.7  | 1.46  | 15.7  | 8.4  | 1.82 | 0.68  | 20.5 | 1.56        | At3g10040                         | unknown protein   | A_84_P11697  | RAFL09-40-M19               | RAFL09-40-M19               |
| AT5G02810.1                                    | 0.252   | 0.048 | 0.26  | 0.077 | 0.757 | 0.134 | 0.989  | 0.017 | 1.08 | 0.08  | 1.02  | 0.02 | 0.61 | 0.13  | 0.53 | 0.1         | At5g02810                         | putative protein  | A_84_P21494  | RAFL04-13-E14               | RAFL04-13-E14               |
| <b>Functional proteins</b>                     |   |       |       |       |       |       |  |       |      |       |   |      |      |       |      |             |                                   |   |              |                             |                             |
| <b>Auxin-regulated protein</b>                 |   |       |       |       |       |       |  |       |      |       |   |      |      |       |      |             |                                   |   |              |                             |                             |
| AT5G18060.1                                    | 1.154   | 0.066 | 0.948 | 0.063 | 0.312 | 0.035 | 0.178  | 0.039 | 1.24 | 0.08  | 3.37  | 0.16 | 1.82 | 0.01  | 2.98 | 0.5         | At5g18060                         | auxin-induced protein-like  | A_84_P94979  | RAFL02-02-B06               | RAFL02-02-B06               |
| AT2G33830.1                                    | 0.228   | 0.018 | 0.307 | 0.026 | 0.412 | 0.024 | 5.147  | 1.627 | 1.43 | 0.01  | 0.61  | 0.01 | 0.46 | 0.1   | 0.45 | 0.1         | At2g33830                         | auxin-regulated protein   | A_84_P13568  | RAFL16-56-G05               | RAFL16-56-G05               |
| AT5G18010.1                                    | 1.111   | 0.093 | 0.91  | 0.098 | 0.279 | 0.043 | 0.167  | 0.015 | 1.22 | 0.15  | 3.86  | 0.71 | 1.8  | 0.07  | 3.04 | 0.59        | At5g18010                         | auxin-induced protein (SAUR), putative  | A_84_P196504 | RAFL05-03-B20               | RAFL05-03-B20               |
| AT1G29440.1                                    | 1.426   | 0.285 | 1.328 | 0.133 | 0.496 | 0.084 | 0.214  | 0.035 | 1.36 | 0.31  | 1.81  | 0.53 | 2.08 | 0.24  | 2.05 | 0.05        | At1g29440                         | auxin-induced protein, putative   | A_84_P279980 | RAFL05-15-K15               | RAFL05-15-K15               |
| AT5G18030.1                                    | 1.077   | 0.12  | 0.948 | 0.022 | 0.334 | 0.013 | 0.164  | 0.052 | 1.26 | 0.02  | 2.6   | 0.13 | 2.03 | 0.14  | 2.56 | 0.45        | At5g18030                         | auxin-induced protein-like  | A_84_P152798 | RAFL21-43-L24               | RAFL21-43-L24               |
| AT5G54510.1                                    | 0.788   | 0.069 | 0.855 | 0.126 | 0.41  | 0.071 | 0.326  | 0.016 | 1.35 | 0.08  | 2.42  | 0.01 | 1.25 | 0.16  | 1.93 | 0.22        | At5g54510                         | auxin-responsive-like protein   | A_84_P10285  | RAFL05-15-C22               | RAFL05-15-C22               |
| AT5G18050.1                                    | 1.163   | 0.167 | 0.986 | 0.129 | 0.378 | 0.062 | 0.229  | 0.009 | 1.29 | 0.13  | 3.09  | 0.21 | 1.59 | 0.3   | 2.33 | 0.19        | At5g18050                         | auxin-induced protein-like  | A_84_P141269 | RAFL08-10-G18               | RAFL08-10-G18               |
| AT1G29500.1                                    | 1.53  | 0.271 | 1.517 | 0.487 | 0.551 | 0.167 | 0.223  | 0.03  | 1.54 | 0.51  | 2.14  | 0.53 | 2.51 | 0.49  | 2.1  | 0.36        | At1g29500                         | auxin-induced protein, putative   | A_84_P11207  | RAFL05-15-H15               | RAFL05-15-H15               |
| AT1G23740.1                                    | 1.404   | 0.132 | 1.214 | 0.061 | 0.395 | 0.037 | 0.2  | 0.009 | 0.95 | 0.1   | 0.95  | 0.11 | 1.43 | 0.08  | 1.78 | 0.08        | At1g23740                         | putative auxin-induced protein  | A_84_P10407  | RAFL05-15-H15               | RAFL05-15-H15               |
| <b>Carbohydrate metabolism-related protein</b> |   |       |       |       |       |       |  |       |      |       |   |      |      |       |      |             |                                   |   |              |                             |                             |
| AT3G43190.1                                    | 0.869   | 0.182 | 0.983 | 0.137 | 0.169 | 0.016 | 0.331  | 0.06  | 1.04 | 0.08  | 7.46  | 0.32 | 0.93 | 0.15  | 9.31 | 0.8         | At3g43190                         | sucrose synthase, putative  | A_84_P20298  | RAFL05-07-J05,RAFL14-25-C06 | RAFL05-07-J05,RAFL14-25-C06 |
| AT3G46970.1                                    | 0.289   | 0.04  | 0.32  | 0.064 | 1.241 | 0.167 | 1.66   | 0.304 | 0.72 | 0.09  | 0.35  | 0.06 | 0.89 | 0.1   | 0.35 | 0.04        | At3g46970                         | starch phosphorylase, putative  | A_84_P15583  | RAFL09-15-L21               | RAFL09-15-L21               |
| AT1G52400.1                                    | 0.512   | 0.003 | 0.598 | 0.026 | 0.414 | 0.032 | 0.122  | 0.01  | 0.97 | 0.14  | 0.63  | 0.08 | 1.3  | 0.06  | 1.4  | 0.08        | At1g52400                         | beta-glucosidase, putative  | A_84_P21673  | RAFL09-15-K15               | RAFL09-15-K15               |
| AT3G18080.1                                    | 0.195   | 0.017 | 0.303 | 0.021 | 0.376 | 0.005 | 0.493  | 0.137 | 0.58 | 0.01  | 1.01  | 0.02 | 0.84 | 0.22  | 0.9  | 0.22        | At3g18080                         | beta-glucosidase like protein   | A_84_P23079  | RAFL08-09-A13               | RAFL08-09-A13               |
| AT3G29320.1                                    | 0.169   | 0.009 | 0.198 | 0.027 | 0.28  | 0.003 | 0.24   | 0.019 | 0.79 | 0.04  | 1.62  | 0.04 | 1.25 | 0.05  | 2.04 | 0.07        | At3g29320                         | glucan phosphorylase, putative  | A_84_P14611  | RAFL09-27-A02               | RAFL09-27-A02               |
| AT1G70820.1                                    | 0.149   | 0.006 | 0.162 | 0.002 | 0.534 | 0.055 | 0.219  | 0.014 | 0.6  | 0.02  | 0.17  | 0    | 0.73 | 0     | 0.48 | 0           | At1g70820                         | phosphoglucomutase, putative  | A_84_P19000  | RAFL09-89-B19               | RAFL09-89-B19               |
| AT4G19170.1                                    | 0.706   | 0.036 | 0.617 | 0.022 | 0.237 | 0.003 | 0.305  | 0.005 | 0.81 | 0.05  | 1.92  | 0.15 | 0.48 | 0.01  | 0.82 | 0.02        | At4g19170                         | 9-cis-epoxycarotenoid dioxygenase (neoxanthin cleavage enzyme)(NC1)(NCED1), prA_84_P19490 | A_84_P19490  | RAFL09-89-B19               | RAFL09-89-B19               |
| <b>Cellular metabolism-related protein</b>     |   |       |       |       |       |       |  |       |      |       |   |      |      |       |      |             |                                   |   |              |                             |                             |
| AT1G32100.1                                    | 1.157   | 0.061 | 1.137 | 0.126 | 0.6   | 0.088 | 0.195  | 0.019 | 1.07 | ##### | 1.29  | 0.03 | 1.2  | 0.3   | 2.62 | 0.3         | At1g32100                         | pinoselin-laricresinol reductase, putative  | A_84_P13432  | RAFL09-26-H18               | RAFL09-26-H18               |
| AT5G07460.1                                    | 0.867   | 0.033 | 0.859 | 0.09  | 0.301 | 0.037 | 0.39   | 0.025 | 0.97 | 0     | 1.9   | 0.33 | 0.93 | 0.05  | 1.21 | 0.17        | At5g07460                         | peptide methionine sulfoxide reductase-like protein                                       | A_84_P13943  | RAFL09-83-E23               | RAFL09-83-E23               |
| AT1G75270.1                                    | 0.905   | 0.042 | 0.869 | 0.028 | 0.328 | 0.012 | 0.452  | 0.02  | 1.48 | 0.06  | 2.3   | 0.03 | 2.27 | 0.04  | 2.86 | 0.08        | At1g75270                         | dehydroascorbate reductase, putative  | A_84_P18122  | RAFL08-19-M09               | RAFL08-19-M09               |
| AT1G20020.1                                    | 0.358   | 0.018 | 0.364 | 0.03  | 0.747 | 0.161 | 0.295  | 0.019 | 0.84 | 0.11  | 0.41  | 0.05 | 1.09 | 0.08  | 0.88 | 0.09        | At1g20020                         | ferredoxin-NADP reductase precursor, putative   | A_84_P20031  | RAFL04-13-N06               | RAFL04-13-N06               |
| AT1G68010.1                                    | 1.205   | 0.187 | 1.07  | 0.094 | 0.479 | 0.286 | 0.338  | 0.038 | 0.89 | 0.16  | 1.46  | 0.26 | 1.26 | 0.3   | 2.2  | 0.44        | At1g68010                         | hydroxypyruvate reductase (HPR)   | A_84_P152773 | RAFL09-41-C22               | RAFL09-41-C22               |
| AT2G28310.1                                    | 0.654   | 0.083 | 0.669 | 0.066 | 0.161 | 0.033 | 0.129  | 0.022 | 0.98 | 0.08  | 2.51  | 0.12 | 0.85 | 0.07  | 2.37 | 0.34        | At2g28310                         | putative tropinone reductase  | A_84_P14443  | RAFL09-33-A06               | RAFL09-33-A06               |
| AT5G37940.1                                    | 0.536   | 0.024 | 0.565 | 0.001 | 0.254 | 0.014 | 0.227  | 0.003 | 1.09 | 0.15  | 1.57  | 0.07 | 0.89 | 0.23  | 1.76 | 0.05        | At5g37940                         | quinone oxidoreductase-like protein   | A_84_P146818 | RAFL06-70-B02               | RAFL06-70-B02               |
| AT1G75280.1                                    | 0.683   | 0.048 | 0.601 | 0.023 | 0.261 | 0.004 | 0.219  | 0.02  | 1.05 | 0.01  | 1.08  | 0.02 | 1.12 | 0     | 2.08 | 0.13        | At1g75280                         | isoflavone reductase homolog P3   | A_84_P18125  | RAFL06-81-O12               | RAFL06-81-O12               |
| AT4G38230.1                                    | 0.714   | 0.072 | 0.572 | 0.022 | 0.286 | 0.011 | 0.318  | 0.036 | 1.19 | 0.11  | 1.24  | 0.05 | 1.01 | 0.1   | 1.52 | 0.05        | At4g38230                         | isoflavone reductase, putative  | A_84_P14844  | RAFL06-12-P15               | RAFL06-12-P15               |
| AT1G19540.1                                    | 0.664   | 0.059 | 0.632 | 0.021 | 0.292 | 0.003 | 0.255  | 0.034 | 1.45 | 0.04  | 1.58  | 0.06 | 1.1  | ##### | 2.24 | 0.23        | At1g19540                         | isoflavone reductase homolog P3, putative   | A_84_P16756  | RAFL19-47-N03               | RAFL19-47-N03               |
| AT1G17990.1                                    | 0.747   | 0.045 | 0.726 | 0.071 | 0.194 | 0.03  | 0.389  | 0.03  | 2.6  | 0.57  | 6.07  | 0.38 | 3.54 | 0.18  | 3.32 | 0.31        | At1g17990                         | 12-   |              |                             |                             |

|  |       |       |       |       |       |       |       |       |       |      |      |      |      |      |      |           |   |   |                             |   |   |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|-----------|---|---|-----------------------------|---|---|
| AT1G76080.1                                    | 0.877 | 0.097 | 0.739 | 0.072 | 0.163 | 0.006 | 0.117 | 0.007 | 0.98  | 0.06 | 1.58 | 0.12 | 1.32 | 0.13 | 2.28 | 0.17      | At1g76080   | chloroplast droust-induced stress protein, putative               | A_84_P29092                 |   | RAFL09-65-D06   |
| AT4G22770.1                                    | 0.653 | 0.011 | 0.58  | 0.023 | 0.287 | 0.041 | 0.282 | 0.00  | 0.9   | 0.23 | 0.14 | 1.57 | 0.01 | 2.11 | 0.12 | At4g22770 | putative photosystem I reaction center subunit II precursor | A_84_P18505   | RAFL05-01-P13,RAFL07-15-A19 | RAFL05-01-P13   |   |
| AT5G06890.1                                    | 0.189 | 0.049 | 0.213 | 0.008 | 1.742 | 0.02  | 0.925 | 0.005 | 1.03  | 0.12 | 0.93 | 0.04 | 0.71 | 0.06 | 1.37 | 0.08      | At5g06890   | thioredoxin-like  | A_84_P10158                 |   | RAFL16-82-B04   |
| AT3G16250.1                                    | 0.925 | 0.034 | 0.806 | 0.042 | 0.312 | 0.057 | 0.222 | 0.009 | 0.92  | 0.07 | 0.98 | 0.2  | 1.71 | 0.18 | 0.83 | 0.07      | At3g16250   | putative 2Fe-2S iron-sulfur cluster protein                       | A_84_P10789                 | RAFL04-20-D12   | RAFL04-20-D12   |
| AT4G26530.1                                    | 0.322 | 0.023 | 0.241 | 0.026 | 0.352 | 0.04  | 0.425 | 0.029 | 0.79  | 0.03 | 0.59 | 0.06 | 0.8  | 0.01 | 4.3  | 0.01      | At4g26530   | fructose-bisphosphate aldolase - like protein                     | A_84_P230529                | RAFL05-12-F16   | RAFL05-12-F16   |
| AT1G03130.1                                    | 0.492 | 0.056 | 0.516 | 0.096 | 0.104 | 0.012 | 0.113 | 0.009 | 1.55  | 0.13 | 0.52 | 0.42 | 2.75 | 0.15 | 0.03 | 0.2       | At1g03130   | putative photosystem I reaction center subunit II precursor       | A_84_P23709                 | RAFL02-02-L10   | RAFL02-02-L10   |
| AT1G51400.1                                    | 0.605 | 0.17  | 0.579 | 0.207 | 0.082 | 0.021 | 0.088 | 0.029 | 1.58  | 0.42 | 8.94 | 3.38 | 0.75 | 5.71 | 1.33 | At1g51400 | photosystem II S KD protein                                 | A_84_P19893   | RAFL05-17-G01               | RAFL05-17-G01   |   |
| AT4G28750.1                                    | 0.586 | 0.116 | 0.435 | 0.102 | 0.37  | 0.054 | 0.174 | 0.035 | 0.86  | 0.02 | 1.49 | 0.02 | 1.88 | 0.35 | 2.74 | 0.42      | At4g28750   | photosystem I reaction center subunit PSI-E - like protein        | A_84_P19867                 | RAFL11-01-L20,RAFL11-02-M05   | RAFL06-84-G05   |
| AT5G64040.1                                    | 0.535 | 0.125 | 0.509 | 0.084 | 0.426 | 0.075 | 0.229 |       | 0.96  | 0.04 | 0.98 | 0.02 | 1.52 | 0.21 | 1.77 | 0.21      | At5g64040   | photosystem I reaction center subunit PSI-N precursor (PSI-N)     | A_84_P10324                 | RAFL06-08-M21   | RAFL06-08-M21   |
| AT1G54780.1                                    | 0.6   | 0.074 | 0.562 | 0.015 | 0.452 | 0.035 | 0.249 | 0.041 | 0.84  | 0    | 0.76 | 0.03 | 1.54 | 0.23 | 1.26 | 0.19      | At1g54780   | thylakoid lumen 18.3 kDa protein                                  | A_84_P259390                | RAFL05-01-I05,RAFL05-19-G04,RAFL07-14-F21                             | RAFL05-19-G04   |
| AT2G05100.1                                    | 0.604 | 0.167 | 0.348 | 0.228 | 0.48  | 0.549 | 0.312 | 0.05  | 0.87  | 0.78 | 0.94 | 0.86 | 1.84 | 0.23 | 1.54 | 0.33      | At2g05100   | light-harvesting chlorophyll a/b binding protein                  | A_84_P24805                 |   | RAFL14-14-C14   |
| AT1G20340.1                                    | 0.916 | 0.175 | 0.708 | 0.128 | 0.403 | 0.052 | 0.218 |       | 0.92  | 0.05 | 1.27 | 0.1  | 1.87 | 0.2  | 2.7  | 0.3       | At1g20340   | plastocyanin  | A_84_P14351                 | RAFL02-04-K03,RAFL11-04-L09   | RAFL11-04-L09   |
| AT1G61520.1                                    | 0.509 | 0.369 | 0.369 | 0.369 | 0.206 |       |       |       | 0.74  | 0.01 | 1.75 | 0.08 | 1.7  | 0.12 | 2.65 | 0.1       | At1g61520   | light-harvesting chlorophyll a/b binding protein                  | A_84_P15141                 | RAFL09-06-C02   | RAFL09-06-C02   |
| AT1G03380.1                                    | 0.809 |       |       |       | 0.466 |       | 0.188 |       | 1.05  | 0.04 | 1.28 | 0.03 | 1.99 | 0.34 | 2.88 | 0.48      | At1g03380   | photosystem I subunit X precursor                                 | A_84_P19035                 | RAFL05-01-F04   | RAFL05-01-F04   |
| AT1G43670.1                                    | 0.695 | 0.024 | 0.61  | 0.015 | 0.532 | 0.06  | 0.288 | 0.004 | 0.895 | 0.1  | 0.74 | 0.07 | 1.11 | 0.02 | 1.63 | 0.04      | At1g43670   | fructose 1,6-bisphosphatase, putative                             | A_84_P14615                 | RAFL05-21-I19   | RAFL05-21-I19   |
| AT2G05070.1                                    | 0.616 | 0.19  | 0.372 | 0.269 | 0.48  | 0.448 | 0.309 | 0.024 | 0.86  | 0.63 | 1    | 0.81 | 1.82 | 0.2  | 1.58 | 0.35      | At2g05070   | light-harvesting chlorophyll a/b binding protein                  | A_84_P288490                | RAFL09-06-E05   | RAFL09-06-E05   |
| AT4G10340.1                                    | 0.577 |       | 0.484 |       | 0.512 |       | 0.266 |       | 0.81  | 0.01 | 0.97 | 0.01 | 1.65 |      | 1.59 |           | At4g10340   | light-harvesting chlorophyll a/b binding protein                  | A_84_P19470                 | RAFL03-04-L10   | RAFL03-04-L10   |
| AT4G05180.1                                    | 0.411 | 0.075 | 0.36  | 0.076 | 0.38  | 0.076 | 0.179 | 0.039 | 0.92  | 0.07 | 1.67 | 0.1  | 1.55 | 0.21 | 2.63 | 0.33      | At4g05180   | oxygen-evolving complex protein 16, chloroplast precursor (OEC16) | A_84_P17567                 | RAFL03-06-D05,RAFL06-16-A22   | RAFL06-16-A22   |
| AT5G16400.1                                    | 0.576 | 0.058 | 0.609 | 0.058 | 0.436 | 0.136 | 0.251 | 0.039 | 0.78  | 0.29 | 1    | 0.35 | 1.2  | 0.1  | 1.4  | 0.09      | At5g16400   | thioredoxin f2 (g)AAD35004.1                                      | A_84_P13023                 | RAFL05-07-G14   | RAFL05-07-G14   |
| AT1G06680.1                                    | 0.609 |       | 0.477 |       | 0.466 |       | 0.229 |       | 0.74  | 0.01 | 1.17 | 0.03 | 1.65 | 0.04 | 2.09 | 0.03      | At1g06680   | photosystem II oxygen-evolving complex 23 (OEC23)                 | A_84_P20343                 |   |   |
| AT1G19150.1                                    | 0.885 | 0.053 | 0.793 | 0.109 | 0.386 | 0.081 | 0.245 | 0.002 | 0.69  | 0.13 | 1.28 | 0.24 | 1.75 | 0.04 | 2.04 |           | At1g19150   | light-harvesting chlorophyll a/b binding protein                  | A_84_P16240                 | RAFL05-17-B17   | RAFL05-17-B17   |
| AT3G50820.1                                    | 0.917 | 0.003 | 0.74  | 0.009 | 0.529 | 0.019 | 0.201 | 0.001 | 0.77  | 0.04 | 0.88 | 0.04 | 1.44 | 0.07 | 1.9  | 0.09      | At3g50820   | photosystem II oxygen-evolving complex 33 (OEC33)                 | A_84_P15599                 | RAFL05-17-G17   | RAFL05-17-G17   |
| AT4G21280.1                                    | 0.902 | 0.105 | 0.729 | 0.074 | 0.428 | 0.021 | 0.256 | 0.028 | 0.85  | 0.01 | 1.38 | 0.04 | 1.88 | 0.1  | 2.37 | 0.07      | At4g21280   | oxygen-evolving complex protein 16, chloroplast precursor (OEC16) | A_84_P11934                 | RAFL05-17-G17   | RAFL05-17-G17   |
| AT5G38410.1                                    |       |       |       |       | 0.36  |       | 0.035 |       | 0.86  | 0.24 | 0.57 | 0.17 | 2.67 | 0.09 | 8.82 | 0.99      | At5g38410   | ribulose biphosphate carboxylase small chain 3b precursor         | A_84_P286650                | 4.1.1.39  | RAFL04-15-J15,RAFL06-14-C19,RAFL09-09-K05,RAFL09-16-C21,RAFL11-07-D01 |
| AT3G01500.1                                    | 1.422 | 0.22  | 1.129 | 0.127 | 0.514 | 0.08  | 0.038 | 0.002 | 0.83  | 0.09 | 0.36 | 0.05 | 1.49 | 0.04 | 3.04 | 0.09      | At3g01500   | carbonic anhydrase, chloroplast precursor                         | A_84_P14520                 | 4.2.1.1   | RAFL06-11-K17,RAFL06-13-B01   |
| AT5G14740.1                                    | 1.77  | 0.071 | 1.594 | 0.071 | 0.589 | 0.019 | 0.231 | 0.009 | 1.13  | 0.03 | 1.45 | 0.05 | 1.47 | 0.22 | 3.01 | 0.31      | At5g14740   | CARBONIC ANHYDRASE 2  | A_84_P18549                 | 4.2.1.1   | RAFL05-02-H13   |
| AT5G38420.1                                    | 1.468 | 0.115 | 0.885 | 0.006 | 0.4   | 0.111 | 0.062 | 0.039 | 0.82  | 0.36 | 1.27 | 0.62 | 4.1  | 0.2  | 9.93 | 1.24      | At5g38420   | ribulose biphosphate carboxylase small chain 2b precursor         | A_84_P96326                 | 4.1.1.39  | RAFL06-08-L09,RAFL06-10-O15,RAFL07-11-L12,RAFL07-14-L17,RAFL08-17-J10 |
| AT1G76100.1                                    | 1.043 | 0.052 | 0.825 | 0.011 | 0.287 | 0.016 | 0.381 | 0.024 | 1.24  | 0.01 | 3.09 | 0.39 | 2.2  | 0.18 | 2.5  | 0.08      | At1g76100   | plastocyanin  | A_84_P14364                 | RAFL04-10-A08   | RAFL04-10-A08   |
| AT3G61470.1                                    | 0.512 | 0.029 | 0.415 | 0.012 | 0.429 | 0.044 | 0.298 | 0.015 | 0.66  | 0.08 | 1.5  | 0.22 | 1.55 | 0.02 | 1.83 | 0.06      | At3g61470   | light-harvesting chlorophyll a/b binding protein                  | A_84_P19428                 |   | RAFL05-11-O16   |
| AT1G15820.1                                    |       |       |       |       | 0.244 |       |       |       | 0.64  | 0.04 | 2.02 | 0.07 | 2.06 | 0.11 | 2.81 | 0.15      | At1g15820   | chlorophyll binding protein, putative                             | A_84_P14174                 | RAFL06-10-Q24   | RAFL06-10-Q24   |
| <b>Plant defense-related protein</b>           |       |       |       |       |       |       |       |       |       |      |      |      |      |      |      |           |   |   |                             |   |   |
| AT1G65970.1                                    | 1.37  | 0.055 | 1.214 | 0.135 | 0.479 | 0.02  | 0.311 | 0.028 | 1.03  | 0.07 | 2.13 | 0.12 | 1.01 | 0.15 | 3.44 | 0.09      | At1g65970   | type 2 peroxidase, putative                                       | A_84_P169033                |   | RAFL14-03-C08   |
| AT1G75380.1                                    | 0.254 | 0.006 | 0.307 | 0.005 | 0.468 | 0.123 | 0.407 | 0.109 | 1.46  |      | 1.42 | 0.31 | 0.7  | 0.2  | 1.21 | 0.39      | At1g75380   | wound-responsive protein, putative                                | A_84_P10533                 |   | RAFL09-23-C11   |
| AT2G39310.1                                    | 0.604 | 0.083 | 1.242 | 0.059 | 0.268 | 0.027 | 0.134 | 0.021 | 0.91  | 0.11 | 2.17 | 0.29 | 0.87 | 0.14 | 1.68 | 0.32      | At2g39310   | putative myrosinase-binding protein                               | A_84_P12602                 | RAFL09-10-G17,RAFL11-09-G01   | RAFL09-10-G17   |
| AT4G10270.1                                    | 1.044 | 0.042 | 0.989 | 0.195 | 0.204 | 0.096 | 0.197 | 0.016 | 1.51  | 0.18 | 7.48 | 0.52 | 2.75 | 1.37 | 5.37 | 0.93      | At4g10270   | probable wound-induced protein                                    | A_84_P17578                 |   |   |
| <b>Protease inhibitor</b>                      |       |       |       |       |       |       |       |       |       |      |      |      |      |      |      |           |   |   |                             |   |   |
| AT2G43530.1                                    | 0.518 | 0.034 | 0.769 | 0.026 | 0.291 | 0.064 | 0.303 | 0.002 | 0.95  | 0.2  | 1.2  | 0.26 | 1.08 | 0.03 | 2.11 | 0.06      | At2g43530   | putative trypsin inhibitor  | A_84_P10611                 |   | RAFL09-56-K23,RAFL14-59-J19   |
| AT2G38870.1                                    | 0.889 | 0.146 | 0.846 | 0.12  | 0.528 | 0.08  | 0.317 | 0.048 | 1.22  | 0.15 | 0.96 | 0.04 | 1.14 | 0.16 | 1.54 | 0.3       | At2g38870   | putative protease inhibitor                                       | A_84_P23913                 |   | RAFL15-14-I21   |
| AT1G73330.1                                    | 0.549 | 0.052 | 0.816 | 0.009 | 0.359 | 0.038 | 0.08  | 0.008 | 1.3   | 0.22 | 1.15 | 0.21 | 0.68 | 0.07 | 1.03 | 0.07      | At1g73330   | Dr1(protease inhibitor)   | A_84_P16271                 | RAFL05-09-D01   | RAFL05-09-D01   |
| <b>Proteolytic degradation</b>                 |       |       |       |       |       |       |       |       |       |      |      |      |      |      |      |           |   |   |                             |   |   |
| AT4G21650.1                                    | 0.732 | 0.098 | 0.731 | 0.098 | 0.326 | 0.044 | 0.208 | 0.024 | 1.19  | 0.13 | 1.61 | 0.2  | 1.19 | 0.2  | 1.95 | 0.38      | At4g21650   | subtilisin-like proteinase - like                                 | A_84_P21392                 | RAFL05-02-P04,RAFL06-08-A17,RAFL09-06-N06,RAFL09-13-C17               | RAFL06-08-A17   |
| AT4G33490.1                                    | 0.288 | 0.01  | 0.319 | 0.023 | 0.68  | 0.069 | 0.567 | 0.081 | 0.86  | 0.04 | 1.96 | 0.07 | 0.85 | 0.1  | 2.14 | 0.27      | At4g33490   | nucellin -like protein  | A_84_P17260                 |   | RAFL21-10-K10   |
| AT4G39090.1                                    | 0.288 | 0.04  | 0.306 | 0.024 | 1.304 | 0.083 | 1.278 | 0.049 | 0.98  | 0.13 | 1.06 | 0.1  | 0.55 | 0.04 | 0.96 | 0.08      | At4g39090   | cysteine proteinase RD19A   | A_84_P18627                 | 3.4.22-2  | RAFL05-21-M07,RD19  |
| AT1G63800.1                                    | 0.368 | 0.045 | 0.443 | 0.034 | 0.232 | 0.016 | 0.318 | 0.007 | 1.23  | 0.15 | 0.05 | 0.6  | 1.2  | 0.12 | 3.4  |           | At1g63800   | E2, ubiquitin-conjugating enzyme 5 (UBC5)                         | A_84_P14319                 | 6.3.2.19  | RAFL05-20-O07   |
| AT4G35350.1                                    | 0.89  | 0.177 | 0.82  | 0.017 | 0.679 | 0.108 | 0.274 | 0.061 | 1.03  | 0.06 | 1.41 | 0.06 | 0.99 | 0.14 | 1.8  | 0.3       | At4g35350   | cysteine protease XCP1  | A_84_P10105                 | 3.4.22-2  | RAFL16-98-B02   |
| <b>RNA-binding protein</b>                     |       |       |       |       |       |       |       |       |       |      |      |      |      |      |      |           |   |   |                             |   |   |
| AT3G47160.1                                    | 0.316 | 0.017 | 0.492 | 0.000 | 1.056 | 0.16  | 1.053 | 0.201 | 0.78  | 0.13 | 1.1  | 0.13 | 0.55 | 0.08 | 0.87 |           | At3g47160   | RNA-binding protein-like protein                                  | A_84_P10858                 |   | RAFL09-61-D05   |
| AT2G21660.1                                    | 0.248 | 0.047 | 0.37  | 0.216 | 1.718 | 4.517 | 2.838 | 1.261 | 0.68  | 0.46 | 0.12 | 0.07 | 0.78 | 0.29 | 0.23 | 0.07      | At2g21660   | glycine-rich RNA binding protein AIGRP7                           | A_84_P11558                 |   | RAFL04-16-B18   |
| <b>Storage protein</b>                         |       |       |       |       |       |       |       |       |       |      |      |      |      |      |      |           |   |   |                             |   |   |
| AT5G24770.1                                    | 0.249 | 0.013 | 0.285 | 0.014 | 1.517 | 0.015 | 0.054 | 0.012 | 0.87  | 0.12 | 0.65 | 0.07 | 0.85 | 0.05 | 1.5  | 0.09      | At5g24770   | vegetative storage protein Vsp2                                   | A_84_P141439                | RAFL06-11-F24,RAFL08-10-I23,RAFL08-11-N14,RAFL08-11-G08,RAFL08-15-M16 | RAFL06-11-F24   |
| AT5G24780.1                                    | 0.353 | 0.04  | 0.586 | 0.081 | 0.303 | 0.112 | 0.128 | 0.015 | 1.21  | 0.52 | 0.77 | 0.33 | 0.76 | 0.04 | 0.76 | 0.02      | At5g24780   | vegetative storage protein Vsp1                                   | A_84_P97476                 | RAFL05-12-E24   | RAFL05-12-E24   |
| <b>Transport protein, ion channel, carrier</b> |       |       |       |       |       |       |       |       |       |      |      |      |      |      |      |           |   |   |                             |   |   |
| AT4G09650.1                                    | 0.931 | 0.03  | 0.935 | 0.016 | 0.47  | 0.049 |       |       |       |      |      |      |      |      |      |           |   |   |                             |   |   |





























Supplemental Table 3-1. Rehydration up-regulated genes identified by the 7K microarray analysis<sup>1</sup>

| Function                             | Ratio(Dehydration/Unstressed) |       |       |       |       | Ratio(Rehydration after dehydration/2hr dehydration) |       |       |       |       | Ratio(Rehydration after dehydration/5hr dehydration) |       |       |       |       | Accession | Accession | Accession |             |       |                      |                              |  |                          |           |          |          |          |
|--------------------------------------|-------------------------------|-------|-------|-------|-------|--|-------|-------|-------|-------|--|-------|-------|-------|-------|-----------|-----------|-----------|-------------|-------|----------------------|------------------------------|--|--------------------------|-----------|----------|----------|----------|
|                                      | 1hr                           | 2hr   | 5hr   | 10hr  | Std.  | 1hr  | 2hr   | 5hr   | 10hr  | Std.  | 1hr  | 2hr   | 5hr   | 10hr  | Std.  |           |           |           | AGI code(s) | EC    | No. (5) <sup>6</sup> | No. (3) <sup>7</sup>         |  |                          |           |          |          |          |
| <b>Regulatory proteins</b>           |                               |       |       |       |       |  |       |       |       |       |  |       |       |       |       |           |           |           |             |       |                      |                              |  |                          |           |          |          |          |
| <b>F-box protein</b>                 |                               |       |       |       |       |  |       |       |       |       |  |       |       |       |       |           |           |           |             |       |                      |                              |  |                          |           |          |          |          |
| RAF106-08-N04                        | 1.09                          | 1.02  | 1.222 | 0.187 | 0.234 | 3.864  | 1.562 | 0.27  | 3.514 | 0.501 | 5.183  | 0.896 | 2.44  | 0.399 | 3.796 | 0.397     | 2.56      | 0.553     | 0.897       | 0.289 | At5g48180            | Kelch repeats protein family | AY059952                                     |                          |           | AV784948 |          |          |
| RAF105-10-023                        | 0.218                         | 0.04  | 0.94  | 0.129 | 0.983 | 0.379  | 0.698 | 1.097 | 0.104 | 2.219 | 0.257  | 2.399 | 0.432 | 3.133 |       |           | 0.885     | 0.174     | 1.998       | 0.78  | At3g14887            | unknown protein              | AY059952                                     |                          |           | AV822733 | AV783551 |          |
| RAF111-12-018                        | 1.061                         | 0.962 | 0.747 | 0.21  | 0.7   | 0.067  | 0.646 | 1.332 | 0.233 | 2.191 | 0.283  | 2.852 | 0.67  | 3.368 | 3.469 | 5.949     | 1.551     | 1.863     | 0.973       | 4.312 | 3.331                | At2g02870                    | Kelch repeat containing F-box protein family | AT139977                 |           |          | AV832362 | AV820897 |
| RAF107-08-014                        | 1.013                         | 0.664 | 0.818 | 0.153 | 0.692 | 1.467  | 1.207 | 1.543 | 0.321 | 3.972 | 0.544  | 1.779 | 0.025 | 1.16  | 0.248 | 0.904     | 0.242     | 3.048     | 2.357       | 1.232 | 1.888                | At2g02870                    | Kelch repeat containing F-box protein family | AY139977                 |           |          | AV832362 | AV791115 |
| <b>Nucleic Acids-related protein</b> |                               |       |       |       |       |  |       |       |       |       |  |       |       |       |       |           |           |           |             |       |                      |                              |  |                          |           |          |          |          |
| RAF105-16-P20                        | 4.479                         | 0.255 | 0.398 | 0.409 | 0.258 | 0.099  | 0.21  | 1.642 | 0.362 | 3.297 | 0.562  | 2.098 | 1.538 | 1.585 | 0.282 | 3.815     | 0.235     | 3.682     | 3.848       | 5.201 | 1.775                | At1g04760                    | histone H1 like protein                      | AY050452                 |           |          | AV823240 | AV784172 |
| RAF106-14-B16                        | 1.11                          | 0.305 | 1.326 | 0.207 | 1.221 | 0.661  | 0.967 | 1.898 | 0.113 | 2.883 | 0.203  | 2.273 | 0.715 | 2.715 | 1.102 | 2.812     | 0.642     | 1.29      | 0.491       | 3.279 | 1.32                 | At1g52740                    | putative histone H2A                         | AY058147                 |           |          | AV824140 | AV785301 |
| RAF109-15-J08                        | 0.602                         | 0.071 | 0.514 | 0.207 | 0.281 | 0.091  | 0.239 | 0.758 | 0.336 | 0.771 | 0.107  | 0.312 | 0.024 | 0.716 | 0.289 | 0.615     | 0.146     | 3.592     | 1.572       | 0.348 | 0.126                | At5g53370                    | putative histone H1 protein                  | AF360211                 |           |          | AV827449 | AV798261 |
| RAF104-09-022                        | 1.228                         | 0.458 | 1.579 | 0.267 | 1.128 | 0.299  | 1.862 | 2.035 | 0.152 | 3.786 | 0.247  | 0.765 | 0.229 | 0.578 | 1.736 | 0.426     | 0.92      | 1.014     | 1.849       | 0.278 | 2.447                | 1.766                        | At3g40030                                    | histone H2B like protein | AV823559  |          |          | AV817682 |
| RAF105-09-P16                        | 0.856                         | 0.104 | 1.098 | 0.292 | 1.046 | 0.373  | 0.821 | 1.24  | 0.42  | 1.154 | 0.559  | 1.644 | 0.122 | 1.312 | 0.438 | 1.867     | 0.553     | 1.148     | 0.256       | 3.11  | 1.559                | At4g00300                    | histone H3.3                                 | AF385735                 |           |          | AV822260 | AV782971 |
| <b>Protein kinase</b>                |                               |       |       |       |       |  |       |       |       |       |  |       |       |       |       |           |           |           |             |       |                      |                              |  |                          |           |          |          |          |
| RAF107-12-G24                        | 0.887                         | 0.119 | 0.48  | 0.15  | 0.238 | 0.135  | 0.288 | 1.476 | 0.494 | 2.645 | 0.021  | 2.424 | 0.979 | 1.949 | 0.515 | 2.224     | 0.421     | 2.302     | 0.461       | 3.678 | 0.279                | At4g39400                    | brassinosteroid insensitive 1 gene (BR1)     | AF360218                 | 2.7, 1.37 |          | AV825660 | AV791881 |
| RAF109-17-D13                        | 0.772                         | 0.237 | 0.465 | 0.121 | 0.524 | 0.039  | 0.426 | 1.061 | 0.254 | 1.648 | 0.212  | 2.026 | 0.237 | 5.164 | 1.013 | 3.525     | 0.830     | 0.867     | 0.072       | 2.612 | 0.366                | At3g45780                    | nonphototropic hypocotyl 1 (NPH1)            | AF360218                 |           |          | AV827583 | AV798698 |
| RAF107-14-H20                        | 3.979                         | 0.895 | 0.315 | 1.359 | 0.434 | 0.087  | 0.678 | 0.758 | 0.336 | 0.771 | 0.107  | 0.312 | 0.024 | 0.716 | 0.289 | 0.615     | 0.146     | 3.592     | 1.572       | 0.348 | 0.126                | At5g53370                    | protein kinase                               | AF360218                 |           |          | AV826241 | AV792325 |
| RAF104-09-022                        | 1.211                         | 0.125 | 0.298 | 0.063 | 0.451 | 0.116  | 0.356 | 1.937 | 0.281 | 1.697 | 0.242  | 1.344 | 0.041 | 3.307 | 0.955 | 4.539     | 0.329     | 1.598     | 0.303       | 2.634 | 0.627                | At1g09570                    | putative phytochrome A                       | AF360218                 |           |          | AV821357 | AV797949 |
| RAF109-14-G19                        | 3.709                         | 1.253 | 1.999 | 0.616 | 1.426 | 0.314  | 2.783 | 2.574 | 0.669 | 2.019 | 0.297  | 1.352 | 0.161 | 0.85  | 0.819 | 0.331     | 0.404     | 3.178     | 1.279       | 1.069 | 0.363                | At5g02880                    | putative protein kinase                      | AF372969                 |           |          | AV797949 |          |
| RAF106-10-G14                        | 0.967                         | 0.064 | 0.176 | 0.164 | 0.684 | 0.299  | 0.722 | 1.156 | 0.206 | 1.442 | 0.054  | 1.376 | 0.071 | 3.977 | 0.579 | 2.24      | 3.355     | 1.289     | 0.14        | 1.76  | 0.646                | At1g60940                    | putative serine/threonine-protein kinase     | AY072340                 |           |          | AV785012 |          |
| RAF108-16-D08                        | 2.094                         | 0.386 | 1.093 | 0.182 | 0.683 | 0.243  | 0.748 | 2.085 | 0.216 | 3.174 | 0.428  | 2.055 | 1.089 | 1.085 | 0.066 | 1.031     | 0.264     | 4.231     | 1.142       | 1.873 | 1.112                | At4g26690                    | unknown protein                              | AY056280                 |           |          | AV826483 | AV795145 |
| <b>Protein phosphatase</b>           |                               |       |       |       |       |  |       |       |       |       |  |       |       |       |       |           |           |           |             |       |                      |                              |  |                          |           |          |          |          |
| RAF107-14-E15                        | 0.606                         | 0.098 | 0.656 | 0.193 | 0.401 | 0.074  | 0.325 | 1.412 | 0.169 | 2.009 | 0.302  | 2.942 | 0.952 | 2.132 | 0.21  | 1.57      | 1.878     | 1.505     | 0.111       | 3.765 | 0.812                | At4g52620                    | putative protein phosphatase-2c              | AY062454                 |           |          | AV825758 | AV792278 |
| <b>Signaling</b>                     |                               |       |       |       |       |  |       |       |       |       |  |       |       |       |       |           |           |           |             |       |                      |                              |  |                          |           |          |          |          |
| RAF105-02-M11                        | 0.618                         | 0.03  | 0.609 | 0.112 | 0.535 | 0.077  | 0.589 | 0.88  | 0.179 | 0.962 | 0.033  | 1.937 | 0.647 | 1.65  | 0.675 | 3.259     | 0.163     | 0.824     | 0.426       | 3.605 | 0.349                | At5g10450                    | 14-3-3-like protein AFT1                     | AY037248                 |           |          | AV822189 | AV782876 |
| RAF106-11-H17                        | 13.77                         | 5.96  | 4.238 | 0.855 | 4.581 | 0.854  | 8.763 | 3.235 | 0.201 | 1.011 | 0.229  | 0.405 | 0.056 | 0.212 | 0.33  | 0.144     |           | 2.075     | 0.608       | 0.21  | 0.025                | At1g76650                    | calmodulin-like protein                      | AT037248                 |           |          | AV820421 |          |
| RAF105-12-B21                        | 4.763                         | 2.038 | 3.358 | 0.887 | 4.452 | 0.734  | 6.372 | 2.291 | 0.321 | 2.993 | 0.436  | 1.726 | 0.645 | 0.834 | 0.085 | 0.89      | 0.25      | 3.688     | 4.452       | 1.084 | 0.227                | At2g41100                    | calmodulin-like protein                      | AY120719                 |           |          | AV822819 | AV783672 |
| RAF109-17-D19                        | 1.651                         | 0.679 | 1.179 | 0.381 | 1.546 | 0.098  | 1.957 | 5.842 | 0.587 | 4.966 | 0.456  | 1.558 | 0.999 | 3.136 | 0.164 | 2.901     | 1.241     | 1.734     | 0.271       | 2.38  | 0.579                | At4g14110                    | calmodulin-like protein                      | AF360307                 |           |          | AV827584 | AV798703 |
| <b>Transcription factor</b>          |                               |       |       |       |       |  |       |       |       |       |  |       |       |       |       |           |           |           |             |       |                      |                              |  |                          |           |          |          |          |
| RAF104-13-F08                        | 0.98                          | 0.122 | 0.831 | 0.192 | 0.811 | 0.204  | 0.786 | 1.021 | 0.066 | 0.571 | 0.1  | 2.963 | 0.559 | 7.2   | 0.488 | 4.339     | 0.814     | 0.785     | 0.148       | 6.528 | 2.203                | At3g16770                    | AP2 domain containing protein RAP2.3         | AY035100                 |           |          | AV821544 | AV782039 |
| RAF108-09-P22                        | 1.019                         | 0.354 | 1.008 | 0.366 | 1.847 | 0.156  | 1.155 | 1.285 | 0.072 | 1.261 | 0.19   | 1.826 | 0.161 | 1.508 | 0.258 | 3.238     | 0.209     | 0.885     | 0.174       | 1.998 | 0.78                 | At3g14887                    | ARR1 protein, putative, 5' partial           | AY059952                 |           |          | AV826803 | AV793514 |
| RAF111-11-A10                        | 0.397                         | 0.163 | 0.242 | 0.047 | 0.264 | 0.113  | 0.129 | 1.566 | 0.75  | 1.931 | 0.48   | 3.021 | 0.244 | 4.357 | 1.624 | 2.583     | 0.336     | 1.955     | 0.609       | 3.243 | 1.113                | At3g58120                    | bZip transcription factor Abz2p1             | AY030053                 |           |          | AV832309 | AV820556 |
| RAF105-20-N17                        | 0.715                         | 0.294 | 0.417 | 0.137 | 0.742 | 0.053  | 0.582 | 0.597 | 0.018 | 0.264 | 0.12   | 0.676 | 0.021 | 4.09  | 0.922 | 1.515     | 0.253     | 0.635     | 0.27        | 0.82  | 0.268                | At2g36380                    | CCA1   | AY050961                 |           |          | AV823536 | AV784525 |
| RAF105-09-H09                        | 0.52                          | 0.22  | 0.756 | 0.128 | 1.283 | 0.407  | 1.204 | 0.777 | 0.075 | 0.966 | 0.144  | 1.352 | 0.431 | 3.564 | 0.264 | 2.134     | 0.624     | 1.018     | 0.41        | 1.216 | 0.19                 | At5g57660                    | CONSTANS-like B-box zinc finger protein-like | AY080747                 |           |          | AV822165 | AV783303 |
| RAF103-07-K19                        | 0.539                         | 0.253 | 0.556 | 0.138 | 0.484 | 0.03   | 0.351 | 0.938 | 0.061 | 0.522 | 0.117  | 0.559 | 0.121 | 6.017 | 0.322 | 2.448     | 0.238     | 0.696     | 0.212       | 0.42  | 0.126                | At3g05530                    | GATA transcription factor 4                  | AF378881                 |           |          | AV821316 | AV781699 |
| RAF109-10-M04                        | 0.575                         | 0.067 | 0.414 | 0.079 | 0.549 | 0.179  | 0.664 | 1.39  | 0.236 | 0.62  | 0.223  | 0.345 | 0.161 | 1.864 | 0.527 | 1.551     | 1.441     | 1.12      | 0.546       | 3.709 | 0.827                | At3g04170                    | homeobox protein (HATS)                      | AY058188                 |           |          | AV827045 | AV797096 |
| ATMYB2                               | 1.067                         | 0.211 | 1.187 | 0.297 | 1.146 | 0.374  | 2.848 | 1.362 | 0.422 | 3.666 | 0.564  | 1.452 | 0.221 | 0.96  | 0.332 | 0.941     | 0.304     | 1.287     | 0.21        | 1.819 | 0.078                | At2g47190                    | MYB transcription factor (Amyb2)             | D14712                   |           |          |          |          |
| RAF104-13-H06                        | 0.734                         | 0.116 | 1.298 | 0.075 | 1.694 | 0.234  | 1.656 | 1.287 | 0.21  | 1.518 | 0.286  | 0.75  | 1.694 | 2.334 | 1.072 | 0.572     | 1.163     | 1.163     | 0.994       | 1.862 | 0.433                | At3g46660                    | putative bHLH transcription factor (bHLH065) | AY058271                 |           |          | AV822945 | AV783204 |
| RAF104-10-F17                        | 1.609                         | 1.010 | 0.644 | 0.279 | 0.592 | 0.105  | 0.399 | 2.574 | 1.898 | 4.239 | 1.357  | 0.443 | 0.528 | 3.329 | 0.955 | 4.539     | 0.329     | 1.882     | 0.11        | 2.626 | 0.693                | At3g56460                    | putative DNA-binding protein                 | AY054546                 |           |          | AV821440 | AV781892 |
| RAF109-16-K13                        | 0.684                         | 0.118 | 0.818 | 0.57  | 0.626 | 0.128  | 0.532 | 5.336 | 0.506 | 3.31  | 0.771  | 2.503 | 0.34  | 1.989 | 0.365 | 2.746     | 0.452     | 2.218     | 1.187       | 2.47  | 0.565                | At1g68840                    | putative DNA-binding protein RAV2            | AF360312                 |           |          | AV827545 | AV798550 |
| RAF108-13-K22                        | 0.482                         | 0.028 | 0.557 | 0.135 | 1.238 | 0.529  | 1.164 | 2.473 | 0.011 | 3.625 | 0.449  | 2.547 | 1.089 | 1.264 | 0.907 | 3.837     | 0.236     | 1.888     | 1.301       | 1.276 | 0.326                | At1g25560                    | putative protein                             | AY056169                 |           |          | AV826377 | AV794624 |
| RAF108-15-L21                        | 0.816                         | 0.08  | 0.728 | 0.212 | 0.634 | 0.016  | 0.816 | 2.825 | 0.911 | 2.64  | 0.25   | 0.881 | 0.048 | 0.395 | 0.259 | 0.34      | 0.22      | 3.283     | 1.87        | 0.254 | 0.051                | At4g34010                    | arginine decarboxylase (spc2)                | AF360221                 |           |          | AV827464 | AV793708 |
| RAF105-09-H09                        | 0.89                          | 0.066 | 0.643 | 0.048 | 1.185 | 0.06   | 0.898 | 0.938 | 0.012 | 1.271 | 0.092  | 0.917 | 0.251 | 3.785 | 1.702 | 2.766     | 1.248     | 1.283     | 0.473       | 1.559 | 0.43                 | At3g06400                    | salt-tolerance protein                       | AY054974                 |           |          | AV823532 | AV784521 |
| RAF11-05-E04                         | 0.908                         | 0.232 | 0.734 | 0.135 | 0.724 | 0.179  | 0.692 | 1.455 | 0.194 | 3.466 | 0.225  | 2.567 | 0.473 | 2.503 | 0.305 | 2.203     | 0.153     | 1.556     | 0.556       | 2.15  | 0.388                | At3g10280                    | transcription factor EREBP like protein      | AY054539                 |           |          | AV832199 | AV781604 |
| RAF109-15-E14                        | 1.104                         | 0.089 | 0.9   | 0.122 | 0.628 | 0.216  | 0.518 |       |       |       |  |       |       |       |       |           |           |           |             |       |                      |                              |  |                          |           |          |          |          |





Supplemental Table 3-2. Rehydration down-regulated genes identified by the 7K microarray analysis)

| Function Gene                | Ratio(Dehydration/Unstressed[2]) |       |       |       |       | Ratio(Rehydration after dehydration/2hr dehydration[3]) |       |       |       |       | Ratio(Rehydration after dehydration/3hr dehydration[3]) |       |       |       |       | Accession | Accession |          |          |       |          |   |   |   |           |          |            |          |
|------------------------------|----------------------------------|-------|-------|-------|-------|---|-------|-------|-------|-------|---|-------|-------|-------|-------|-----------|-----------|----------|----------|-------|----------|---|---|---|-----------|----------|------------|----------|
|                              | 1hr                              | 2hr   | 5hr   | 10hr  | 10hr  | 1hr   | 2hr   | 5hr   | 10hr  | 24hr  | 2hr   | 24hr  | 2hr   | 24hr  | EC    |           |           | No. (5*) | No. (3*) |       |          |   |   |   |           |          |            |          |
| <b>Regulatory proteins</b>   |                                  |       |       |       |       |   |       |       |       |       |   |       |       |       |       |           |           |          |          |       |          |   |   |   |           |          |            |          |
| Nucleic acid-related protein |                                  |       |       |       |       |   |       |       |       |       |   |       |       |       |       |           |           |          |          |       |          |   |   |   |           |          |            |          |
| RAF105-20-P13                | 0.506                            | 0.028 | 0.406 | 0.036 | 0.667 | 0.076   | 0.533 | 0.56  | 0.059 | 0.298 | 0.009   | 1.08  | 0.45  | 1.414 | 0.263 | 2.649     | 1.275     | 0.392    | 0.184    | 1.163 | 0.145    | A0218050  | histone H1  | AY045797                                  |           | AV823543 | AV784537   |          |
| <b>Protein kinase</b>        |                                  |       |       |       |       |   |       |       |       |       |   |       |       |       |       |           |           |          |          |       |          |   |   |   |           |          |            |          |
| RAF107-14-H20                | 3.979                            | 0.895 | 3.015 | 1.269 | 4.434 | 0.287   | 6.678 | 0.758 | 0.336 | 0.771 | 0.107   | 0.312 | 0.020 | 0.716 | 0.289 | 0.615     | 1.446     | 3.592    | 1.572    | 0.348 | 0.126    | A0562370  | protein kinase  | AY062461                                  |           | AV192325 |            |          |
| RAF105-08-F01                | 1.473                            | 0.287 | 1.643 | 0.331 | 4.001 | 0.286   | 6.678 | 0.853 | 0.103 | 0.585 | 0.032   | 0.439 | 0.245 | 0.294 | 0.038 | 0.611     | 0.249     | 0.826    | 0.28     | 0.349 | 0.81     | A0353570  | protein kinase (AME2/AF1)                             | AY034936                                  | 2.7.1.-1  | AV822552 | AV783311   |          |
| RAF105-07-B08                | 7.552                            | 3.248 | 7.487 | 3.557 | 10.71 | 5.723   | 13.14 | 1.106 | 0.104 | 0.467 | 0.029   | 0.474 | 0.372 | 0.013 | 0.288 | 0.206     | 0.636     | 0.107    | 0.193    | 0.033 | A0230360 | putative protein kinase                               | AY050023  |   | AV823648  | AV784653 |            |          |
| RAF105-19-007                | 4.317                            | 0.739 | 2.092 | 0.471 | 1.111 | 0.99  | 2.214 | 1.243 | 0.22  | 0.326 | 0.057   | 0.249 | 0.271 | 0.027 | 0.333 | 0.146     | 1.862     | 0.827    | 0.453    | 0.027 | A0347000 | putative protein kinase                               | AY080876  |   | AV823654  | AV820841 |            |          |
| RAF11-12-10                  | 1.782                            | 0.71  | 1.778 | 0.771 | 2.849 | 1.909   | 7.146 | 1.25  | 0.208 | 0.821 | 0.106   | 0.501 | 0.078 | 0.334 | 0.174 | 0.819     | 0.375     | 1.238    | 0.482    | 0.219 | 0.027    | A0232800  | putative protein kinase                               | AY056257                                  |           | AV823664 | AV795151   |          |
| RAF107-13-F17                | 4.382                            | 0.963 | 2.653 | 0.272 | 1.683 | 0.705   | 2.233 | 1.039 | 0.161 | 0.933 | 0.117   | 0.48  | 0.084 | 0.236 | 0.063 | 0.473     | 0.08      | 2.457    | 0.315    | 0.601 | 0.037    | A0213790  | putative receptor protein kinase (F13J11.14/A0213790) | AY056241                                  |           | AV823674 | AV794295   |          |
| RAF106-16-D18                | 1.298                            | 0.373 | 1.727 | 0.409 | 3.975 | 1.192   | 5.08  | 1.3   | 0.176 | 0.978 | 0.027   | 0.371 | 0.169 | 0.251 | 0.024 | 0.56      | 0.137     | 1.101    | 0.07     | 0.251 | 0.154    | A0420050  | putative serine/threonine kinase                      | AY054688                                  |           | AV823684 | AV782437   |          |
| RAF106-12-12                 | 1.148                            | 0.288 | 1.625 | 0.614 | 3.091 | 6.471   | 0.279 | 0.04  | 0.209 | 0.405 | 0.186   | 0.021 | 0.304 | 0.067 | 0.279 | 0.131     | 1.382     | 0.266    | 0.798    | 0.081 | A0451150 | putative protein kinase                               | AY056242  |   | AV823694  | AV794295 |            |          |
| RAF104-17-G24                | 1.115                            | 0.167 | 1.193 | 0.384 | 3.004 | 0.804   |       |       |       |       |   |       |       |       |       |           |           | 0.429    | 0.148    | 0.786 | 0.234    | A0332000  | SNF1 related protein kinase (ATSRPK1)                 | AY056488                                  |           | AV823704 | AV794295   |          |
| <b>Protein phosphatase</b>   |                                  |       |       |       |       |   |       |       |       |       |   |       |       |       |       |           |           |          |          |       |          |   |   |   |           |          |            |          |
| RAF105-15-E19                | 2.999                            | 0.5   | 1.785 | 0.942 | 3.147 | 12.81   | 0.952 | 0.099 | 0.3   | 0.016 | 0.153   | 0.056 | 0.083 | 0.01  | 0.197 | 0.076     | 0.479     | 0.105    | 0.078    | 0.014 | A0305640 | putative protein phosphatase-2C                       | AY050388  |   | AV823099  |          |            |          |
| RAF106-07-B19                | 3.87                             | 1.117 | 2.989 | 0.987 | 4.4   | 0.501   | 6.081 | 0.639 | 0.046 | 0.298 | 0.094   | 0.179 | 0.043 | 0.145 | 0.038 | 0.281     | 0.037     | 0.687    | 0.204    | 0.131 | 0.031    | A0311410  | protein phosphatase 2C (PP2C)                         | AY074368                                  | 3.1.3.1.6 | AV823651 | AV784656   |          |
| <b>Signaling</b>             |                                  |       |       |       |       |   |       |       |       |       |   |       |       |       |       |           |           |          |          |       |          |   |   |   |           |          |            |          |
| RAF106-11-H17                | 13.77                            | 5.06  | 4.238 | 0.855 | 4.581 | 0.854   | 8.763 | 3.235 | 0.201 | 1.011 | 0.129   | 0.43  | 0.045 | 0.526 | 0.212 | 0.33      | 1.44      | 2.075    | 0.608    | 0.21  | 0.025    | A0176650  | calcium-binding EF-hand family protein                | BT002421                                  |           | AV823665 | AV795058   |          |
| RAF105-15-A01                | 1.352                            | 0.51  | 1.352 | 0.51  | 1.352 | 0.51  | 1.352 | 0.839 | 0.118 | 0.424 | 0.035   | 0.233 | 0.104 | 0.232 | 0.103 | 0.352     | 0.838     | 0.118    | 0.424    | 0.035 | A0438810 | EF-hand signaling protein-like                        | AY056243  |   | AV823676  | AV795058 |            |          |
| RAF105-12-H03                | 2.286                            | 0.252 | 2.326 | 0.747 | 2.351 | 0.573   | 4.495 | 0.906 | 0.062 | 0.517 | 0.06  | 0.335 | 0.118 | 0.482 | 0.31  | 0.372     | 0.296     | 0.738    | 0.074    | 0.271 | 0.09     | A0562580  | protein-coupled receptor-like protein                 | AY046451                                  |           | AV823687 | AV783718   |          |
| RD20                         | 7.756                            | 3.23  | 16.86 | 31.79 | 21.27 | 21.1  | 1.34  | 0.202 | 0.472 | 0.043 | 0.136   | 0.037 | 0.172 | 0.047 | 0.116 | 0.43      | 0.855     | 0.221    | 0.04     | 0.023 | A0233380 | putative calcium-binding EF-hand protein              | AB039424  |   | AV795289  |          |            |          |
| RAF106-16-M12                | 12.14                            | 3.779 | 29.05 | 15.31 | 88.4  | 20.26   | 123.5 | 1.662 | 0.345 | 0.555 | 0.03  | 0.105 | 0.012 | 0.163 | 0.038 | 0.086     | 0.118     | 1.244    | 0.305    | 0.034 | 0.01     | A0233380  | putative calcium-binding EF-hand protein              | AY062661                                  |           | AV795289 |            |          |
| RAF105-12-E15                | 2.816                            | 3.357 | 2.652 | 1.423 | 1.943 | 0.894   | 4.242 | 1.252 | 0.397 | 1.116 | 0.124   | 0.434 | 0.091 | 0.322 | 0.339 | 0.568     | 0.64      | 1.61     | 0.32     | 0.379 | 0.101    | A0436030  | spinal recognition particle receptor-like protein     | AY056246                                  |           | AV794322 |            |          |
| <b>Transcription factor</b>  |                                  |       |       |       |       |   |       |       |       |       |   |       |       |       |       |           |           |          |          |       |          |   |   |   |           |          |            |          |
| RAF106-11-K21                | 4.851                            | 1.038 | 5.881 | 4.325 | 7.809 | 4.8   | 12.23 | 0.324 | 0.022 | 0.089 | 0.017   | 0.033 | 0.000 | 0.05  | 0.02  | 0.132     | 0.079     | 0.44     | 0.041    | 0.115 | 0.226    | A0208800  | ap2 domain transcription factor                       | AY056248                                  |           | AV823996 | AV785103   |          |
| RAF106-11-H19                | 1.21                             | 0.134 | 1.661 | 0.443 | 1.082 | 0.153   | 1.101 | 0.55  | 0.029 | 0.439 | 0.057   | 0.235 | 0.037 | 0.299 | 0.068 | 0.427     | 0.132     | 0.6      | 0.127    | 0.37  | 0.136    | A0228550  | AP1 transcription factor like protein                 | AY050815                                  |           | AV794094 |            |          |
| RAF106-17-A14                | 0.984                            | 0.135 | 2.037 | 0.255 | 2.394 | 0.644   | 2.247 | 0.846 | 0.062 | 0.759 | 0.061   | 0.296 | 0.122 | 0.249 | 0.035 | 0.223     | 0.078     | 0.553    | 0.023    | 0.232 | 0.126    | A0221050  | AUX1-like amino acid permease                         | AY054884                                  |           | AV821832 | AV782396   |          |
| RAF105-12-G11                | 0.851                            | 0.054 | 1.056 | 0.064 | 1.801 | 0.341   | 2.496 | 1.333 | 0.191 | 2.222 | 0.338   | 1.413 | 0.115 | 0.609 | 0.032 | 0.888     | 0.227     | 0.916    | 0.273    | 0.265 | 0.046    | A0302420  | c/ebp transcription factor Abz2p53                    | AY070761                                  |           | AV824045 | AV785180   |          |
| RAF106-12-M01                | 1.557                            | 0.383 | 3.872 | 1.179 | 6.952 | 2.109   | 11.53 | 1.388 | 0.249 | 0.683 | 0.073   | 0.584 | 0.187 | 0.68  | 0.019 | 0.522     | 0.073     | 1.825    | 0.603    | 0.221 | 0.019    | A0417610  | DNA binding like protein                              | AB007790                                  |           | AV824056 | AV785180   |          |
| DREB2A                       | 26.47                            | 2.685 | 13.01 | 9.215 | 16.73 | 3.964   | 22.37 | 0.77  | 0.25  | 0.318 | 0.018   | 0.11  | 0.204 | 0.019 | 0.216 | 0.202     | 0.829     | 0.329    | 0.06     | 0.006 | A0565410 | DREB2A (dbjBAA33794.1)                                | AY048209  |   | AV824067  | AV792087 |            |          |
| RAF105-09-F18                | 1.483                            | 0.368 | 2.194 | 0.985 | 3.093 | 0.835   | 3.223 | 0.976 | 0.135 | 0.271 | 0.026   | 0.302 | 0.232 | 0.302 | 0.496 | 0.243     | 0.48      | 0.145    | 0.256    | 0.046 | A0246720 | H-box binding ZIP transcription factor GBF3 / Abz2p55 | AF370307  |   | AV822612  | AV783418 |            |          |
| RAF11-11-F18                 | 3.043                            | 0.475 | 1.153 | 0.475 | 5.364 | 26.65   | 0.415 | 0.131 | 0.176 | 0.025 | 0.248   | 0.104 | 0.337 | 0.073 | 0.107 | 0.12      | 0.711     | 0.133    | 0.176    | 0.025 | A0451800 | homeobox transcription factor AT4-18                  | AY048208  |   | AV822612  | AV793886 |            |          |
| RAF106-10-K11                | 1.688                            | 0.305 | 1.677 | 0.423 | 1.824 | 0.13  | 3.335 | 0.888 | 0.028 | 0.581 | 0.296   | 0.085 | 0.388 | 0.199 | 0.4   | 0.026     | 0.913     | 0.363    | 0.283    | 0.012 | A0435550 | homeobox transcription factor                         | AY048206  |   | AV822612  | AV793886 |            |          |
| RAF105-20-M16                | 2.006                            | 0.56  | 1.413 | 0.832 | 2.18  | 0.48  | 0.848 | 0.405 | 0.656 | 0.192 | 0.336   | 0.086 | 0.356 | 0.073 | 0.31  | 0.123     | 0.467     | 0.133    | 0.714    | 0.159 | 0.232    | 0.06  | A0246680  | homeodomain transcription factor (ATHB-7) | AY048206  |          | AV822612   | AV793886 |
| RAF106-16-C02                | 2.396                            | 0.264 | 1.899 | 0.601 | 1.843 | 1.432   | 3.229 | 0.822 | 0.164 | 0.304 | 0.081   | 0.589 | 0.116 | 0.865 | 0.217 | 0.734     | 0.356     | 1.332    | 0.222    | 0.44  | 0.022    | A0451800  | homeobox transcription factor                         | AY048206                                  |           | AV822612 | AV793886   |          |
| RAF106-18-D12                | 0.808                            | 0.199 | 0.672 | 0.218 | 0.45  | 0.1   | 0.517 | 0.864 | 0.164 | 0.304 | 0.081   | 0.589 | 0.116 | 0.865 | 0.217 | 0.734     | 0.356     | 0.512    | 0.153    | 0.896 | 0.098    | A0357230  | MADS-box transcription factor (AGL16)                 | AY048206                                  |           | AV822612 | AV793886   |          |
| RAF106-14-D24                | 2.941                            | 1.591 | 6.158 | 3.912 | 9.257 | 4.224   | 17.29 | 1.022 | 0.251 | 0.265 | 0.017   | 0.426 | 0.317 | 0.222 | 0.225 | 0.146     | 1.051     | 0.083    | 0.108    | 0.079 | A0461010 | MYB-like protein                                      | AF369832  |   | AV823002  | AV783889 |            |          |
| RAF106-07-E08                | 1.542                            | 0.203 | 1.925 | 0.179 | 3.261 | 1.528   | 0.474 | 0.929 | 0.081 | 0.441 | 0.031   | 0.538 | 0.159 | 0.339 | 0.091 | 0.617     | 0.146     | 1.953    | 0.126    | 0.316 | 0.029    | A0451800  | myb-like protein kinase                               | AY056249                                  |           | AV823002 | AV796274   |          |
| RAF105-05-M05                | 1.947                            | 0.367 | 1.768 | 0.537 | 1.314 | 0.176   | 1.303 | 0.485 | 0.07  | 0.446 | 0.019   | 0.406 | 0.011 | 0.317 | 0.052 | 0.437     | 0.053     | 0.615    | 0.113    | 0.612 | 0.067    | A0178080  | putative AP2 domain containing protein (At1g78000)    | AF370152                                  |           | AV823375 | AV781322   |          |
| RAF106-12-N16                | 5.611                            | 0.742 | 3.944 | 1.629 | 4.14  | 1.12  | 4.424 | 1.076 | 0.187 | 0.371 | 0.059   | 0.227 | 0.04  | 0.449 | 0.02  | 0.383     | 0.087     | 1.738    | 0.666    | 0.233 | 0.007    | A0246510  | putative bHLH transcription factor (bHLH017)          | AY049389                                  |           | AV823002 | AV797626   |          |
| RAF106-18-G10                | 1.502                            | 0.237 | 1.801 | 0.486 | 1.204 | 0.288   | 1.411 | 0.546 | 0.116 | 0.567 | 0.051   | 0.33  | 0.058 | 0.61  | 0.094 | 0.499     | 0.073     | 1.507    | 0.528    | 0.556 | 0.01     | A0563810  | putative bHLH transcription factor (bHLH046)          | AY038016                                  |           | AV823002 | AV797626   |          |
| RAF11-12-C17                 | 3.705                            | 0.484 | 3.002 | 0.944 | 6.109 | 2.288   | 6.109 | 2.203 | 0.635 | 1.044 | 0.068   | 0.504 | 0.082 | 0.228 | 0.056 | 0.759     | 0.239     | 1.179    | 0.684    | 0.318 | 0.04     | A0261040  | putative CCAAT-type zinc finger protein               | AY038016                                  |           | AV823002 | AV797626   |          |
| RAF105-16-H23                | 9.982                            | 7.362 | 10.18 | 8.828 | 21.79 | 11.61   | 55.57 | 0.618 | 0.027 | 0.094 | 0.013   | 0.051 | 0.041 | 0.038 | 0.013 | 0.081     | 0.072     | 0.661    | 0.081    | 0.045 | 0.027    | A0426120  | putative DNA-binding protein                          | AY045974                                  |           | AV823002 | AV794610   |          |
| RAF105-21-L12                | 5.14                             | 4.965 | 3.647 | 1.387 | 6.198 | 3.84  | 14.77 | 0.358 | 0.054 | 0.199 | 0.061   | 0.094 | 0.033 | 0.046 | 0.011 | 0.255     | 0.136     | 0.165    | 0.056    | 0.078 | 0.084    | A0322830  | putative heat shock protein                           | AY045974                                  |           | AV823002 | AV794610   |          |
| RAF106-08-C01                | 3.209                            | 0.334 | 2.592 | 0.421 | 1.918 | 0.478   | 3.229 | 0.686 | 0.218 | 0.274 | 0.018   | 0.224 | 0.088 | 0.418 | 0.078 | 0.239     | 0.102     | 0.865    | 0.388    | 0.053 | 0.022    | A0461010  | putative protein                                      | AY056250                                  |           | AV823002 | AV794610</ |          |





Supplemental Table 3-3. Dehydration up-regulated genes identified by the 7K microarray analysis)

| Function Gene                        | Ratio(Dehydration/Unstressed) <sup>1</sup> |        |        |       | Ratio(Rehydration after dehydration/2hr dehydration) <sup>2</sup> |       |       |       | Accession | Accession |       |       |       |       |       |       |          |           |           |          |          |
|--------------------------------------|--|--------|--------|-------|---|-------|-------|-------|-----------|-----------|-------|-------|-------|-------|-------|-------|----------|-----------|-----------|----------|----------|
|                                      | Av.  | Std.   | Av.    | Std.  | Av.   | Std.  | Av.   | Std.  |           |           | Av.   | Std.  |       |       |       |       |          |           |           |          |          |
| <b>Regulatory proteins</b>           |  |        |        |       |   |       |       |       |           |           |       |       |       |       |       |       |          |           |           |          |          |
| <b>Fibrotin protein</b>              |  |        |        |       |   |       |       |       |           |           |       |       |       |       |       |       |          |           |           |          |          |
| RAF105-08-B11                        | 3.47                                       | 0.812  | 6.034  | 4.465 | 8.809   | 7.248 | 17.37 | 0.703 | 0.075     | 0.417     | 0.075 | 0.801 | 0.171 | 0.663 | 0.339 | 0.245 | AY034087 | AV1783283 |           |          |          |
| RAF105-09-D06                        | 0.423                                      | 0.032  | 1.698  | 0.312 | 4.689   | 0.676 | 4.652 | 1.282 | 0.325     | 1.961     | 0.318 | 2.169 | 0.565 | 0.677 | 0.187 | 0.066 | AY018125 | AV023821  | AV748811  |          |          |
| <b>Nucleic Acids-related protein</b> |  |        |        |       |   |       |       |       |           |           |       |       |       |       |       |       |          |           |           |          |          |
| RAF105-17-C14                        | 1.02                                       | 0.152  | 0.967  | 0.135 | 1.36  | 0.295 | 3.651 | 0.944 | 0.077     | 0.629     | 0.076 | 0.957 | 0.167 | 0.662 | 0.105 | 0.998 | 0.54     | AY023554  | AV784188  |          |          |
| RAF105-18-E11                        | 1.458                                      | 0.201  | 1.416  | 0.311 | 1.947   | 0.393 | 3.101 | 0.844 | 0.118     | 0.753     | 0.075 | 0.499 | 0.324 | 0.621 | 0.146 | 0.58  | 0.153    | AY059720  | AV1794296 |          |          |
| <b>Protein kinase</b>                |  |        |        |       |   |       |       |       |           |           |       |       |       |       |       |       |          |           |           |          |          |
| RAF105-17-K15                        | 3.008                                      | 1.018  | 1.077  | 0.314 | 1.542   | 0.807 | 1.821 | 1.636 | 0.399     | 0.801     | 0.138 | 0.075 | 0.237 | 0.568 | 0.1   | 1.24  | 0.064    | AF288961  | 2.7.1-1   | AV181892 | AV782470 |
| RAF105-14-H20                        | 0.895                                      | 0.3015 | 1.359  | 0.434 | 2.087   | 0.679 | 0.756 | 0.336 | 0.771     | 0.107     | 0.312 | 0.074 | 0.126 | 0.789 | 0.015 | 0.146 | 0.000    | AY042641  | AV782325  |          |          |
| RAF105-06-F01                        | 1.473                                      | 0.287  | 2.164  | 0.439 | 3.331   | 0.471 | 2.866 | 1.063 | 0.103     | 0.585     | 0.030 | 0.439 | 0.240 | 0.294 | 0.030 | 0.481 | 0.249    | AY034036  | 2.7.1-1   | AV182253 | AV783311 |
| RAF105-14-H21                        | 4.229                                      | 0.728  | 3.434  | 0.989 | 2.462   | 1.156 | 3.922 | 1.969 | 0.454     | 1.111     | 0.141 | 1.625 | 0.214 | 0.176 | 0.317 | 0.589 | 0.068    | AY023554  | AV783827  |          |          |
| RAF105-07-B08                        | 7.552                                      | 3.287  | 7.487  | 3.577 | 10.71   | 5.723 | 13.14 | 1.156 | 0.104     | 0.467     | 0.027 | 0.296 | 0.047 | 0.372 | 0.014 | 0.288 | 0.026    | AY042641  | AV783848  | AV784653 |          |
| RAF105-11-J11                        | 1.732                                      | 0.711  | 1.778  | 0.771 | 2.824   | 1.069 | 3.146 | 1.238 | 0.482     | 0.719     | 0.351 | 0.079 | 0.334 | 0.319 | 0.319 | 0.375 | 0.000    | AY023554  | AV784142  |          |          |
| RAF105-13-D20                        | 1.13                                       | 0.221  | 1.238  | 0.117 | 2.26  | 0.495 | 4.46  | 1.689 | 0.447     | 1.371     | 0.378 | 0.147 | 0.075 | 0.236 | 0.036 | 0.036 | 0.036    | AY026429  | AV782574  | AV781609 |          |
| RAF105-14-G19                        | 3.709                                      | 1.253  | 1.999  | 0.616 | 1.424   | 0.314 | 2.763 | 2.574 | 0.669     | 2.019     | 0.297 | 1.352 | 0.81  | 0.95  | 0.819 | 0.931 | 0.044    | AY037269  | AV783949  |          |          |
| RAF105-09-D01                        | 2.317                                      | 0.789  | 2.392  | 0.421 | 1.589   | 0.312 | 1.443 | 1.243 | 0.328     | 0.386     | 0.056 | 0.457 | 0.349 | 0.22  | 0.035 | 0.149 | 0.000    | AY026429  | AV783957  |          |          |
| RAF104-20-D21                        | 3.884                                      | 1.278  | 1.563  | 0.636 | 1.166   | 0.206 | 1.03  | 0.89  | 0.078     | 0.952     | 0.064 | 0.626 | 0.225 | 0.367 | 0.024 | 0.52  | 0.12     | AY094412  | AV182207  | AV782656 |          |
| RAF105-10-A09                        | 6.756                                      | 1.259  | 1.313  | 0.504 | 1.339   | 0.655 | 1.063 | 1.56  | 0.167     | 0.808     | 0.033 | 0.472 | 0.36  | 0.332 | 0.071 | 0.789 | 0.129    | AY026429  | AV782691  | AV785903 |          |
| RAF105-14-H24                        | 4.51                                       | 0.569  | 1.072  | 0.368 | 1.421   | 0.44  | 2.29  | 1.39  | 0.5       | 1.121     | 0.093 | 0.624 | 0.111 | 0.75  | 0.093 | 0.785 | 0.047    | AY055226  | 2.7.1-1   | AV785226 |          |
| RAF105-16-D14                        | 1.288                                      | 0.373  | 1.727  | 0.409 | 3.975   | 0.152 | 5.08  | 1.101 | 0.177     | 0.578     | 0.227 | 0.371 | 0.169 | 0.251 | 0.024 | 0.536 | 0.137    | AY055226  | AV782646  | AV785151 |          |
| RAF105-12-E12                        | 1.148                                      | 0.088  | 1.625  | 0.161 | 0.569   | 0.471 | 0.68  | 0.562 | 0.132     | 0.298     | 0.058 | 0.152 | 0.039 | 0.152 | 0.039 | 0.152 | 0.039    | AY055226  | AV782646  | AV785151 |          |
| RAF105-09-H02                        | 4.846                                      | 0.804  | 2.117  | 0.42  | 1.578   | 0.772 | 1.618 | 1.45  | 0.33      | 1.026     | 0.068 | 0.573 | 0.262 | 0.514 | 0.028 | 0.895 | 0.215    | AY026529  | AV782697  | AV785073 |          |
| RAF104-16-A16                        | 4.756                                      | 1.186  | 1.922  | 0.295 | 1.647   | 0.287 | 1.183 | 0.52  | 0.402     | 0.466     | 0.034 | 0.338 | 0.054 | 0.231 | 0.488 | 0.172 | 0.000    | AY038699  | AV782699  | AV785226 |          |
| RAF105-08-B05                        | 0.026                                      | 0.007  | 0.087  | 0.01  | 1.564   | 0.425 | 0.000 | 1.027 | 0.078     | 0.033     | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001    | AY055226  | AV782699  | AV785226 |          |
| RAF105-18-B01                        | 6.333                                      | 1.269  | 3.014  | 0.571 | 1.726   | 0.056 | 2.364 | 1.095 | 0.171     | 0.528     | 0.029 | 0.468 | 0.068 | 0.441 | 0.071 | 0.438 | 0.053    | AY055226  | AV782699  | AV785226 |          |
| RAF105-13-F17                        | 2.382                                      | 0.953  | 2.853  | 0.272 | 1.683   | 0.705 | 2.233 | 1.038 | 0.161     | 0.833     | 0.117 | 0.48  | 0.084 | 0.326 | 0.063 | 0.473 | 0.08     | AY055226  | AV782699  | AV785226 |          |
| <b>Protein phosphatase</b>           |  |        |        |       |   |       |       |       |           |           |       |       |       |       |       |       |          |           |           |          |          |
| RAF105-15-F19                        | 2.589                                      | 0.5    | 5.01   | 2.885 | 7.942   | 3.147 | 12.81 | 0.852 | 0.098     | 0.3       | 0.162 | 0.153 | 0.053 | 0.083 | 0.01  | 0.197 | 0.076    | AY055226  | AV782699  | AV785226 |          |
| RAF105-07-B19                        | 3.87                                       | 1.177  | 2.889  | 0.887 | 4.4   | 0.501 | 6.081 | 0.639 | 0.046     | 0.298     | 0.094 | 0.179 | 0.043 | 0.145 | 0.038 | 0.281 | 0.037    | AY074368  | 3.1.1.6   | AV784856 |          |
| <b>Signaling</b>                     |  |        |        |       |   |       |       |       |           |           |       |       |       |       |       |       |          |           |           |          |          |
| RAF106-11-H17                        | 13.77                                      | 5.96   | 4.238  | 0.855 | 4.581   | 0.854 | 8.763 | 3.235 | 0.201     | 0.101     | 0.129 | 0.43  | 0.045 | 0.526 | 0.21  | 0.33  | 0.144    | BT002421  |           |          |          |
| RAF105-08-B12                        | 3.542                                      | 0.728  | 3.549  | 0.668 | 3.913   | 1.913 | 4.746 | 1.958 | 0.154     | 1.628     | 0.056 | 0.813 | 0.11  | 0.786 | 0.172 | 0.376 | 0.035    | AY055226  | AV782699  | AV785226 |          |
| RAF105-12-B12                        | 4.793                                      | 2.038  | 3.887  | 0.867 | 4.622   | 0.734 | 3.372 | 2.291 | 0.221     | 2.863     | 0.464 | 1.726 | 0.464 | 0.834 | 0.69  | 0.22  | 0.000    | AY026529  | AV782699  | AV785226 |          |
| RAF105-09-D22                        | 6.596                                      | 3.687  | 2.851  | 0.825 | 2.552   | 0.197 | 2.624 | 1.435 | 0.073     | 0.777     | 0.027 | 0.401 | 0.34  | 0.526 | 0.18  | 0.541 | 0.144    | AY042641  | AV783949  | AV784653 |          |
| RAF105-14-H20                        | 1.352                                      | 0.133  | 2.296  | 0.332 | 0.359   | 0.044 | 0.044 | 0.839 | 0.118     | 0.414     | 0.038 | 0.29  | 0.044 | 0.22  | 0.032 | 0.102 | 0.000    | AY042641  | AV783949  | AV784653 |          |
| RAF104-09-J21                        | 3.77                                       | 1.33   | 1.618  | 0.41  | 1.882   | 0.161 | 2.624 | 1.499 | 0.254     | 0.927     | 0.186 | 0.991 | 0.274 | 0.052 | 0.043 | 0.614 | 0.151    | AY042641  | AV783949  | AV784653 |          |
| RAF105-10-H09                        | 2.286                                      | 0.225  | 2.326  | 0.477 | 2.351   | 0.573 | 4.96  | 0.906 | 0.062     | 0.517     | 0.36  | 0.335 | 0.116 | 0.482 | 0.311 | 0.372 | 0.296    | AY042641  | AV783949  | AV784653 |          |
| RAF105-07-D07                        | 0.702                                      | 0.333  | 0.81   | 0.221 | 1.468   | 0.18  | 4.2   | 1.007 | 0.037     | 0.543     | 0.071 | 1.363 | 0.555 | 0.485 | 0.001 | 1.448 | 0.455    | AY042641  | AV783949  | AV784653 |          |
| RAF11-11-H19                         | 1.974                                      | 0.956  | 2.247  | 0.622 | 2.721   | 0.918 | 3.366 | 2.135 | 0.449     | 1.841     | 0.277 | 1.045 | 0.244 | 1.132 | 0.682 | 0.913 | 0.27     | AY042641  | AV783949  | AV784653 |          |
| <b>RBD</b>                           |  |        |        |       |   |       |       |       |           |           |       |       |       |       |       |       |          |           |           |          |          |
| RAF105-16-M11                        | 7.756                                      | 3.21   | 16.86  | 14.66 | 31.78   | 21.27 | 11.76 | 1.34  | 0.202     | 0.472     | 0.338 | 0.037 | 0.172 | 0.047 | 0.116 | 0.043 | 0.000    | AB03924   |           |          |          |
| RAF105-16-M11                        | 12.14                                      | 3.779  | 20.05  | 15.31 | 48.4  | 20.26 | 19.26 | 1.682 | 0.345     | 0.555     | 0.03  | 0.105 | 0.025 | 0.183 | 0.038 | 0.096 | 0.011    | AB03924   |           |          |          |
| <b>Transcription factor</b>          |  |        |        |       |   |       |       |       |           |           |       |       |       |       |       |       |          |           |           |          |          |
| RAF106-11-K21                        | 4.851                                      | 1.088  | 5.981  | 4.325 | 7.809   | 4.8   | 12.23 | 0.324 | 0.022     | 0.089     | 0.018 | 0.037 | 0.000 | 0.000 | 0.02  | 0.132 | 0.079    | AY026429  | AV783949  | AV784653 |          |
| RAF105-18-N14                        | 4.423                                      | 1.014  | 1.739  | 0.445 | 1.993   | 0.314 | 2.216 | 1.091 | 0.193     | 0.736     | 0.047 | 0.03  | 0.179 | 0.077 | 0.059 | 0.51  | 0.162    | AY042641  | AV783949  | AV784653 |          |
| RAF105-10-H24                        | 1.433                                      | 0.369  | 1.796  | 0.482 | 0.911   | 0.34  | 0.732 | 0.459 | 0.06      | 0.482     | 0.011 | 0.42  | 0.151 | 0.074 | 0.071 | 0.48  | 0.345    | AY042641  | AV783949  | AV784653 |          |
| RAF105-12-M10                        | 1.557                                      | 0.363  | 3.872  | 1.179 | 6.255   | 0.209 | 11.53 | 1.388 | 0.248     | 0.645     | 0.073 | 0.584 | 0.167 | 0.68  | 0.019 | 0.522 | 0.073    | AY042641  | AV783949  | AV784653 |          |
| DREB2A                               | 26.47                                      | 2.686  | 13.011 | 9.215 | 16.73   | 3.864 | 23.27 | 0.77  | 0.25      | 0.318     | 0.016 | 0.11  | 0.04  | 0.094 | 0.126 | 0.202 | 0.000    | AY042641  | AV783949  | AV784653 |          |
| RAF105-08-B12                        | 1.483                                      | 0.628  | 1.527  | 0.384 | 1.986   | 0.352 | 3.223 | 0.773 | 0.139     | 0.771     | 0.038 | 0.56  | 0.239 | 0.326 | 0.232 | 0.046 | 0.000    | AY042641  | AV783949  | AV784653 |          |
| RAF105-09-D22                        | 6.596                                      | 3.687  | 2.851  | 0.825 | 2.552   | 0.197 | 2.624 | 1.435 | 0.073     | 0.777     | 0.027 | 0.401 | 0.34  | 0.526 | 0.18  | 0.541 | 0.144    | AY042641  | AV783949  | AV784653 |          |
| RAF105-14-H20                        | 1.352                                      | 0.133  | 2.296  | 0.332 | 0.359   | 0.044 | 0.044 | 0.839 | 0.118     | 0.414     | 0.038 | 0.29  | 0.044 | 0.22  | 0.032 | 0.102 | 0.000    | AY042641  | AV783949  | AV784653 |          |
| RAF104-09-J21                        | 3.77                                       | 1.33   | 1.618  | 0.41  | 1.882   | 0.161 | 2.624 | 1.499 | 0.254     | 0.927     | 0.186 | 0.991 | 0.274 | 0.052 | 0.043 | 0.614 | 0.151    | AY042641  | AV783949  | AV784653 |          |
| RAF105-10-H09                        | 2.286                                      | 0.225  | 2.326  | 0.477 | 2.351   | 0.573 | 4.96  | 0.906 | 0.062     | 0.517     | 0.36  | 0.335 | 0.116 | 0.482 | 0.311 | 0.372 | 0.296    | AY042641  | AV783949  | AV784653 |          |
| RAF105-07-D07                        | 0.702                                      | 0.333  | 0.81   | 0.221 | 1.468   | 0.18  |       |       |           |           |       |       |       |       |       |       |          |           |           |          |          |







**Supplemental Table 3-4. Dehydration down-regulated genes identified by the 7K RAFL cDNA microarray analysis(1)**

Real scale

Dry expression normalized data from anything to 0.33 in at least 1 of 4 conditions.

| Function                                   | Gene          | Ratio(Dehydration/Unstressed)2) |      |     |      |     |      |      |      | Ratio(Rehydration after dehydration/ 2hr dehydration)3) |      |     |      |     |      |      |      | Ratio(Rehydration after dehydration/ 5hr dehydration)3) |      |     |      | Accession Genbank | Accession No. (5) <sup>6)</sup> | Accession No. (3) <sup>7)</sup> |   |          |          |          |          |
|--|---------------|---------------------------------|------|-----|------|-----|------|------|------|---|------|-----|------|-----|------|------|------|---|------|-----|------|-------------------|---------------------------------|---------------------------------|---|----------|----------|----------|----------|
|  |               | 1hr                             |      | 2hr |      | 5hr |      | 10hr |      | 1hr   |      | 2hr |      | 5hr |      | 10hr |      | 24hr  |      | 2hr |      |                   |                                 |                                 | 24hr  |          |          |          |          |
|  |               | Av.                             | Std. | Av. | Std. | Av. | Std. | Av.  | Std. | Av.   | Std. | Av. | Std. | Av. | Std. | Av.  | Std. | Av.   | Std. | Av. | Std. |                   |                                 |                                 | Av.   | Std.     |          |          |          |
| <b>Regulatory proteins</b>                 |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
| <b>F-box protein</b>                       |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
|  | RAFL05-10-O23 | 0.2                             | 0    | 0.4 | 0.1  | 1   | 0.4  | 0.7  | 1.1  | 0.1   | 2.2  | 0.3 | 2.4  | 3.4 | 3.1  | 0.1  | 2.4  | 0.3   | 0.7  | 0.1 | 1.7  | 0.7               | 0.7                             | At1g23390                       | unknown protein                                       | AY120706 | AV822733 | AV783557 |          |
| <b>Nucleic Acids-related protein</b>       |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
|  | RAFL05-16-P20 | 0.5                             | 0.3  | 0.4 | 0    | 0.3 | 0.1  | 0.2  | 1.6  | 0.4   | 3.3  | 0.6 | 2.1  | 1.5 | 1.4  | 0.3  | 3.8  | 0.2   | 3.7  | 3.8 | 5.2  | 1.8               | 1.8                             | At1g06760                       | histone H1 like protein                               | AY050452 | AV823240 | AV784172 |          |
|  | RAFL09-15-J08 | 0.6                             | 0    | 0.5 | 0.1  | 0.3 | 0.1  | 0.2  | 1.3  | 0.4   | 2.8  | 0.2 | 2.5  | 0.6 | 2.1  | 1.4  | 2.4  | 0.8   | 3.6  | 0.9 | 3.6  | 0.7               | 0.7                             | At2g30620                       | putative histone H1 protein                           | AF360211 | AV827449 | AV798261 |          |
| <b>Protein kinase</b>                      |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
|  | RAFL07-12-G24 | 0.9                             | 0.1  | 0.5 | 0.1  | 0.2 | 0.1  | 0.3  | 1.5  | 0.5   | 2.6  | 0   | 2.4  | 1   | 1.9  | 0.5  | 2.2  | 0.4   | 2.3  | 0.5 | 3.7  | 0.3               | 0.3                             | At4g39400                       | brassinosteroid insensitive 1 gene (BR1)              |          | AV825660 | AV791881 |          |
|  | RAFL04-18-B02 | 0.8                             | 0.3  | 0.5 | 0    | 0.3 | 0    | 0.2  | 0.9  | 0.1   | 1.9  | 0.3 | 2.5  | 0.2 | 1.6  | 0    | 1.8  | 0.4   | 1.1  | 0.3 | 2.8  | 0.4               | 0.4                             | At1g31420                       | hypothetical protein                                  |          | AV821919 | AV782503 |          |
| <b>Protein phosphatase</b>                 |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
|  | RAFL07-14-E15 | 0.6                             | 0.1  | 0.7 | 0.2  | 0.4 | 0.1  | 0.3  | 1.4  | 0.2   | 2    | 0.3 | 2.9  | 1   | 2.1  | 0.2  | 1.6  | 0.2   | 1.5  | 0.1 | 3.8  | 0.8               | 0.8                             | At4g38520                       | putative protein phosphatase-2c                       | AY062454 | AV825758 | AV792278 |          |
|  | RAFL07-16-L12 | 0.5                             | 0.1  | 0.5 | 0.1  | 0.3 | 0    | 0.3  | 0.5  | 0   | 0.5  | 0.1 | 0.7  | 0.1 | 0.6  | 0.2  | 0.5  | 0   | 0.8  | 0.1 | 1    | 0.2               | 0.2                             | At5g53140                       | protein phosphatase 2C-like                           | AY065026 |          | AV792802 |          |
|  | RAFL07-09-P04 | 0.5                             | 0.1  | 0.4 | 0.1  | 0.3 | 0.1  | 0.2  | 0.6  | 0   | 0.5  | 0   | 0.7  | 0.1 | 0.5  | 0.1  | 0.4  | 0.1   | 0.5  | 0.1 | 0.7  | 0.3               | 0.3                             | At5g53140                       | protein phosphatase 2C-like                           |          |          | AV791305 |          |
| <b>Signaling</b>                           |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
|  | RAFL07-08-J03 | 2.1                             | 0.5  | 1.2 | 0.2  | 0.5 | 0.2  | 0.3  | 1.1  | 0.2   | 1.2  | 0.6 | 2.2  | 0.4 | 1.7  | 0.1  | 0.7  | 0.1   | 1.2  | 0.2 | 1.9  | 1                 | 1                               | At2g41090                       | calcium binding protein (CaBP-22)                     | AY046044 | AV825348 | AV791045 |          |
| <b>Transcription factor</b>                |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
|  | RAFL11-11-A10 | 0.4                             | 0.2  | 0.2 | 0    | 0.3 | 0.1  | 0.1  | 1.6  | 0.8   | 1.9  | 0.5 | 3    | 0.2 | 4.4  | 1.6  | 2.6  | 0.3   | 2    | 0.6 | 3.2  | 1.1               | 1.1                             | At3g58120                       | bZip transcription factor AtbZip61                    | AY093053 | AV832309 | AV820556 |          |
|  | RAFL05-21-N20 | 0.2                             | 0    | 0.4 | 0    | 1   | 0.1  | 1.1  | 1.6  | 0.5   | 3.4  | 0.6 | 2.1  | 1.1 | 2.3  | 1.2  | 2.3  | 0.3   | 1    | 0.6 | 0.8  | 0.2               | 0.2                             | At5g61590                       | ethylene responsive element binding factor - like     | AY045968 | AV823620 |          |          |
|  | RAFL04-14-H12 | 0.3                             | 0    | 0.4 | 0.1  | 0.3 | 0.1  | 0.1  | 0.6  | 0.1   | 0.9  | 0.1 | 2.6  | 0.2 | 2.3  | 0.4  | 2.4  | 0.2   | 0.9  | 0.2 | 2.4  | 0.4               | 0.4                             | At4g36540                       | putative bHLH transcription factor (bHLH058)          | AF370231 | AV821624 | AV782135 |          |
|  | RAFL08-17-G21 | 0.7                             | 0.2  | 0.4 | 0.1  | 0.4 | 0.1  | 0.3  | 0.8  | 0.2   | 1.3  | 0.1 | 1.2  | 0.3 | 1.3  | 0.4  | 1.4  | 0.2   | 1    | 0.1 | 1.8  | 0.4               | 0.4                             | At5g64340                       | Unknown protein (At5g64340; MSJ1.18)                  | AY062561 | AV826538 | AV795396 |          |
| <b>Functional proteins</b>                 |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
| <b>Auxin-regulated protein</b>             |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
|  | RAFL11-02-J01 | 0.5                             | 0.2  | 0.4 | 0.1  | 0.3 | 0    | 0.2  | 1.7  | 0.5   | 2    | 0.2 | 2.4  | 0.8 | 1.5  | 0.4  | 1.8  | 0.6   | 1.1  | 0.2 | 2.2  | 0.7               | 0.7                             | At4g34760                       | putative auxin-regulated protein                      | AY042802 | AV832090 | AV819145 |          |
| <b>Cellular metabolism-related protein</b> |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
|  | RAFL06-13-H08 | 0.9                             | 0    | 0.6 | 0.1  | 0.4 | 0.1  | 0.3  | 1.1  | 0.4   | 2    | 0   | 2.5  | 0.6 | 1.6  | 0.2  | 1.6  | 0.1   | 0.8  | 0   | 1.4  | 0.2               | 0.2                             | At1g32440                       | putative pyruvate kinase, plastid isozyme (At1g32440) | AY058121 |          |          |          |
|  | RAFL05-14-G19 | 0.9                             | 0.1  | 0.5 | 0.1  | 0.3 | 0    | 0.3  | 0.9  | 0.1   | 2.1  | 0.1 | 3.5  | 0.3 | 3.6  | 0.2  | 3.5  | 0.6   | 1.7  | 0.5 | 6.2  | 2                 | 2                               | At5g13710                       | 24-sterol C-methyltransferase                         | AY120716 | 2.1.1.41 | AV823019 | AV783910 |
|  | RAFL06-13-H16 | 0.7                             | 0.1  | 0.6 | 0.1  | 0.4 | 0    | 0.3  | 0.8  | 0.1   | 0.5  | 0   | 0.7  | 0.2 | 0.8  | 0.1  | 0.7  | 0.1   | 0.7  | 0.5 | 0.9  | 0.2               | 0.2                             | At1g11860                       | aminomethyltransferase-like precursor protein         | AY125509 | 2.1.2.10 | AV824095 | AV785243 |
|  | RAFL05-04-M03 | 0.7                             | 0.2  | 0.7 | 0.2  | 0.4 | 0.2  | 0.3  | 0.7  | 0.1   | 0.4  | 0   | 0.7  | 0.2 | 0.5  | 0    | 0.5  | 0.1   | 0.5  | 0   | 0.8  | 0.1               | 0.1                             | At1g32470                       | glycine cleavage system H protein precursor, putative | AF385740 | AV822316 | AV783039 |          |
|  | RAFL06-13-N10 | 0.8                             | 0    | 0.7 | 0    | 0.4 | 0    | 0.3  | 0.6  | 0.1   | 0.4  | 0.1 | 0.8  | 0.3 | 1.5  | 1    | 3    | 1   | 0.9  | 0.3 | 2.4  | 1.5               | 1.5                             | At2g22980                       | putative serine carboxypeptidase I                    | AF410326 | AV824125 | AV785282 |          |
|  | RAFL09-11-L03 | 0.8                             | 0.1  | 0.7 | 0.2  | 0.3 | 0.2  | 0.2  | 0.6  | 0   | 0.3  | 0.1 | 0.6  | 0.1 | 0.5  | 0.5  | 1.3  | 2.2   | 0.4  | 0.1 | 3    | 0.7               | 0.7                             | At5g65010                       | asparagine synthetase (gb)AAC72837.1)                 | AF367340 | 6.3.5.4  | AV827137 | AV797334 |
| <b>Cell wall-related protein</b>           |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
|  | RAFL04-16-D03 | 0.6                             | 0.2  | 0.5 | 0.1  | 0.4 | 0    | 0.3  | 0.6  | 0.1   | 0.9  | 0.1 | 1.1  | 0.1 | 0.8  | 0.3  | 1    | 0.4   | 0.8  | 0.1 | 1.1  | 0.2               | 0.2                             | At3g57790                       | polygalacturonase, putative                           | AY065080 |          | AV782311 |          |
|  | RAFL04-13-J15 | 0.4                             | 0    | 0.3 | 0    | 0.4 | 0.2  | 0.3  | 1.3  | 0.3   | 1.2  | 0.1 | 5.6  | 1.3 | 2.4  | 0.8  | 4    | 1.1   | 0.4  | 0.1 | 4.6  | 0.8               | 4_0_8763f                       | arabinogalactan-protein family  | AY035118  | AV821563 | AV782062 |          |          |
|  | RAFL06-15-M08 | 0.7                             | 0.1  | 0.5 | 0.1  | 0.3 | 0    | 0.3  | 0.8  | 0.1   | 0.9  | 0   | 1.5  | 0.4 | 1.5  | 0.5  | 1.6  | 0.2   | 1.5  | 1   | 2.3  | 0.6               | 0.6                             | At2g45470                       | fasciclin-like arabinogalactan protein FLA8           | AY094443 | AV824190 | AV785379 |          |
|  | RAFL04-19-N09 | 0.4                             | 0    | 0.4 | 0    | 0.3 | 0    | 0.2  | 0.6  | 0   | 1    | 0.1 | 1.5  | 0.1 | 1.6  | 0.4  | 1.7  | 0.4   | 0.8  | 0.2 | 1.8  | 0.5               | 0.5                             | At3g07010                       | putative pectate lyase                                |          | AV822011 | AV782628 |          |
|  | RAFL09-09-L11 | 0.5                             | 0.1  | 0.5 | 0.1  | 0.3 | 0    | 0.2  | 0.7  | 0.1   | 1.6  | 0.2 | 1.5  | 0.2 | 1.5  | 0.1  | 1.6  | 0.2   | 0.8  | 0.7 | 3.2  | 0.6               | 0.6                             | At3g14310                       | pectin methylesterase like protein                    | AY058892 | AV826937 | AV796821 |          |
|  | RAFL04-09-O24 | 1.5                             | 0.4  | 0.5 | 0.2  | 0.3 | 0.1  | 0.2  | 3.1  | 0.9   | 6.2  | 0.8 | 18   | 10  | 7.5  | 4.1  | 33   | 7.1   | 8.9  | 3.3 | 37   | 7.1               | 7.1                             | At4g30270                       | xyloglucan endo-1,4-beta-D-glucanase precursor        | AY035156 | AV821416 | AV781861 |          |
|  | RAFL02-07-H03 | 0.6                             | 0.1  | 0.3 | 0.2  | 0.3 | 0.2  | 0.2  | 2.4  | 0.7   | 2.2  | 0.4 | 2.9  | 1.2 | 3.8  | 2    | 5.2  | 4.1   | 1.2  | 0.7 | 3.5  | 0.8               | 0.8                             | At5g10430                       | AtAGP4  |          |          |          |          |
|  | RAFL11-10-A22 | 0.6                             | 0.1  | 0.3 | 0.2  | 0.4 | 0.1  | 0.1  | 0.9  | 0.3   | 2.5  | 0.9 | 5.5  | 1.8 | 4.3  | 1.4  | 1.8  | 0.5   | 1.5  | 0.5 | 3.6  | 2.4               | 2.4                             | At3g37800                       | endo-xyloglucan transferase - like protein            | AY093025 |          | AV820395 |          |
|  | RAFL11-11-H13 | 0.5                             | 0.1  | 0.2 | 0.1  | 0.1 | 0.1  | 0.2  | 3.2  | 1.7   | 7.2  | 0.8 | 5.9  | 2.2 | 1.5  | 0.2  | 1.8  | 0.9   | 1.8  | 0.2 | 3.3  | 0.2               | 0.2                             | At4g03210                       | putative xyloglucan endotransglycosylase              | AY072353 | AV832320 | AV820630 |          |
|  | RAFL09-06-B09 | 0.7                             | 0.1  | 0.3 | 0.1  | 0.2 | 0.1  | 0.2  | 0.6  | 0.2   | 1.8  | 0.1 | 3.8  | 1.1 | 2    | 0.4  | 2.1  | 0.6   | 1.5  | 0.3 | 3.5  | 0.5               | 0.5                             | At4g23820                       | putative polygalacturonase                            | AY062697 | AV826655 | AV795990 |          |
|  | RAFL07-10-K05 | 0.5                             | 0.1  | 0.2 | 0.2  | 0.3 | 0.2  | 0.2  | 1.7  | 0.3   | 15   | 7.2 | 35   | 14  | 9.8  | 3.8  | 23   | 0.5   | 1.6  | 0.4 | 26   | 7.7               | 7.7                             | At4g14130                       | xyloglucan endotransglycosylase-related protein XTR-7 | AY045865 | AV825528 | AV791464 |          |
|  | RAFL09-07-E15 | 0.6                             | 0.1  | 0.4 | 0.2  | 0.3 | 0.2  | 0.2  | 0.7  | 0.1   | 3.9  | 0.7 | 19   | 6.7 | 13   | 8    | 28   | 6.5   | 1.9  | 0.2 | 29   | 23                | 23                              | At5g49360                       | xylosidase  | AY120767 | AV826799 | AV796277 |          |
|  | RAFL05-18-A21 | 0.7                             | 0.1  | 0.2 | 0.1  | 0.2 | 0    | 0.2  | 2.3  | 0.8   | 11   | 5.1 | 8.5  | 4.8 | 3.1  | 2.2  | 6.3  | 1.3   | 2.7  | 1   | 6.2  | 2                 | 2                               | At5g65390                       | arabinogalactan protein AGP7                          | AY050361 | AV823332 | AV784281 |          |
|  | RAFL07-10-G09 | 0.9                             | 0.2  | 0.5 | 0.2  | 0.2 | 0.1  | 0.2  | 1.5  | 0.1   | 2.5  | 0.3 | 3.1  | 0.3 | 3.6  | 0.8  | 2.5  | 0.2   | 2.1  | 2   | 4.5  | 2.9               | 2.9                             | At2g06850                       | putative endoxyloglucan glycosyltransferase           | AY056201 | AV825497 | AV791409 |          |
|  | EXGT-A1       | 1                               | 0.1  | 0.5 | 0.1  | 0.2 | 0    | 0.1  | 1.4  | 0.4   | 2.5  | 0.4 | 5.4  | 0.4 | 3.9  | 0.1  | 2.3  | 0.8   | 2.3  | 0.9 | 6.1  | 2.2               | 2.2                             | At2g06850                       | putative endoxyloglucan glycosyltransferase           | D16454.1 |          |          |          |
|  | RAFL08-17-A06 | 1.4                             | 0.2  | 0.8 | 0.1  | 0.2 | 0.1  | 0.3  | 2.6  | 0.6   | 3.9  | 0.3 | 6.5  | 1.2 | 3.7  | 0.6  | 4.4  | 2.4   | 2.8  | 1.3 | 14   | 3.9               | 3.9                             | At2g06850                       | putative endoxyloglucan glycosyltransferase           | AY059873 | AV826523 | AV795318 |          |
|  | RAFL11-02-K17 | 1.1                             | 0.1  | 0.6 | 0.2  | 0.2 | 0.1  | 0.2  | 1.7  | 0.3   | 3.5  | 0.4 | 4.6  | 1.9 | 4.8  | 1.8  | 2.8  | 0.3   | 3.3  | 0.4 | 7.2  | 2.2               | 2.2                             | At2g06850                       | putative endoxyloglucan glycosyltransferase           | AY054547 | AV832096 | AV819163 |          |
|  | RAFL11-07-H22 | 1.3                             | 0.5  | 1   | 0.3  | 0.4 | 0.1  | 0.2  | 2.6  | 0.9   | 4    | 1.1 | 5.8  | 1.7 | 4.6  | 5.4  | 4.5  | 6.2   | 2.1  | 1.1 | 9.7  | 3                 | 3                               | At2g06850                       | putative endoxyloglucan glycosyltransferase           | AF386928 | AV832252 | AV819842 |          |
| <b>Cytochrome P450</b>                     |               |                                 |      |     |      |     |      |      |      |   |      |     |      |     |      |      |      |   |      |     |      |                   |                                 |                                 |   |          |          |          |          |
|  | RAFL07-18-B05 | 0.5                             | 0.1  | 0.9 | 0.2  | 0.4 | 0.1  | 0.2  | 0.6  | 0.1   | 1.3  | 0.2 | 0.8  | 0.2 | 1    | 0.2  | 1.3  | 0   | 1.8  | 0.4 | 2    | 0.2               | 0.2                             | At1g13110                       | putative cytochrome P450 monooxygenase                | AF462855 | 1.14.--  | AV825963 | AV793090 |
|  | RAFL07-07-M09 | 1.1                             | 0    | 0.7 | 0.2  | 0.2 | 0    | 0.1  | 0.6  | 0.1   | 0.5  | 0.1 | 0.3  | 0   | 1.6  | 0.3  | 0.7  | 0   | 0.7  | 0.2 |      |                   |                                 |                                 |   |          |          |          |          |







| Gene          | 1.83 | 2.03 | 1.17 | 0.28 | 1.24 | 0.43 | 0.82 | 0.29 | 0.39 | 0.1  | 0.74 | 0.12 | 0.7  | 1.4  | 0.64 | 0.26 | 0.47 | 0.19 | 1.97 | 1.55 | 2.84 | 0.17 | 5.95 | 0.11 | 6.78 | 0.22 | 7.54 | 1.08 | 1.2  | 0.17 | 2.81 | 0.88 | 6.48 | 1.03 | 4.68 | 1.95 | 7.74 | 0.71 | 0.79 | 0.07 | 0.47 | 0.13 | 0.31 | 0.17 | 0.34 | 1.2  | 0.14 | 1.8  | 0.24 | 3.47 | 1.25 | 2.99 | 0.02 | 4.18 | 0.35 | 1.17 | 0.16      | 6.31                | 3.18      | ATg326520                                      | salt-stress induced tonoplast intrinsic protein               | AF419613 | AV826853 | AV796428 |          |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|---------------------|-----------|--|---|----------|----------|----------|----------|
| RAFL06-09-P22 | 2.56 | 2.85 | 1.5  | 0.63 | 1.46 | 1.04 | 1.3  | 0.21 | 0.34 | 0.14 | 0.48 | 0.16 | 0.5  | 0.18 | 0.48 | 0.15 | 0.36 | 0.06 | 2.11 | 1.53 | 3.99 | 1.07 | 9.22 | 0.33 | 8.9  | 0.52 | 7.43 | 3.71 | 2.03 | 0.84 | 5.62 | 3.5  | 12.2 | 1.91 | 5.57 | 2.86 | 12.2 | 1.51 | 0.67 | 0.08 | 0.53 | 0.15 | 0.29 | 0.13 | 0.34 | 1.69 | 0.48 | 3.27 | 0.39 | 6.22 | 3.38 | 6    | 0.28 | 4.12 | 0.86 | 2.41 | 0.7       | 9.07                | 3.76      | ATg326240                                      | delta tonoplast integral protein (delta-TIP)                  | AY065181 | AV823885 | AV784962 |          |
| RAFL06-08-F07 | 2.14 | 1.58 | 1.35 | 0.19 | 0.98 | 0.28 | 0.76 | 0.06 | 0.42 | 0    | 0.42 | 0.08 | 0.53 | 0.03 | 0.49 | 0.04 | 0.37 | 0.1  | 1.59 | 1.28 | 1.68 | 0.03 | 3.7  | 0.1  | 4.19 | 0.78 | 3.5  | 1.17 | 1.48 | 0.11 | 4.11 | 1.43 | 6.11 | 0.71 | 3.77 | 1.78 | 7.09 | 1.68 | 0.63 | 0.13 | 0.51 | 0.05 | 0.65 | 0.05 | 0.6  | 1.07 | 0.08 | 1.29 | 0.09 | 3.12 | 0.52 | 1.83 | 0.6  | 1.91 | 1.22 | 1.02 | 0.2       | 1.69                | 0.18      | AT4g35100                                      | plasma membrane intrinsic protein PIP3                        | AY062803 |          | AV784971 |          |
| RAFL09-18-C14 | 1.89 | 0.28 | 2.17 | 0.37 | 3.05 | 1.19 | 1.79 | 0.18 | 1.45 | 0.39 | 2.8  | 0.24 | 1.87 | 0.17 | 1.46 | 0.42 | 1.49 | 0.35 | 1.6  | 0.33 | 3.19 | 0.31 | 2.67 | 0.45 | 2.19 | 0.19 | 3.05 | 1.48 | 1.76 | 0.2  | 1.47 | 0.14 | 2.33 | 0.42 | 1.85 | 0.38 | 2.61 | 0.04 | 1.58 | 0.38 | 1.3  | 0.27 | 0.69 | 0.3  | 0.79 | 1.27 | 0.16 | 0.81 | 0.07 | 1.89 | 0.66 | 1.85 | 0.83 | 1.72 | 1.24 | 0.92 | 0.31      | 4.79                | 1.99      | At1g37130                                      | nitrate reductase (At1g37130)                                 | AY039914 | 1.7.1.1  | AV798954 |          |
| RAFL04-15-K08 | 1.79 | 0.2  | 1.83 | 0.21 | 1.65 | 0.59 | 1.01 | 0.14 | 0.97 | 0.03 | 1.47 | 0.49 | 1.16 | 0.11 | 1.26 | 0.59 | 1.14 | 0.24 | 1.51 | 0.36 | 3.07 | 0.06 | 2.43 | 0.41 | 1.81 | 0.45 | 1.99 | 0.18 | 1.59 | 0.34 | 1.41 | 0.24 | 2.15 | 0.05 | 1.71 | 0.16 | 2.14 | 0.52 | 1.92 | 0.31 | 3.22 | 0.33 | 2.64 | 0.4  | 2.56 | 0.16 | 3.32 | 0.73 | 1.72 | 0.15 | 1.55 | 0.3  | 2.13 | 0.5  | 1.94 | 0.16 | 2.6       | 0.24                | At1g37130 | Arabidopsis thaliana nitrate reductase 2 (NR2) | AY035111  | 1.7.1.1  | AV827445 | AV798250 |          |
| RAFL09-15-H11 | 1.87 | 0.4  | 2.06 | 0.16 | 2.64 | 1.31 | 1.99 | 0.09 | 1.42 | 0.19 | 2.86 | 0.45 | 1.84 | 0.4  | 1.74 | 0.67 | 1.97 | 0.01 | 1.92 | 0.31 | 3.22 | 0.33 | 2.64 | 0.4  | 2.56 | 0.16 | 3.32 | 0.73 | 1.72 | 0.15 | 1.55 | 0.3  | 2.13 | 0.5  | 1.94 | 0.16 | 2.6  | 0.24 | 1.16 | 0.18 | 0.81 | 0.17 | 0.53 | 0.19 | 0.56 | 0.88 | 0.17 | 0.71 | 0.04 | 1.39 | 0.06 | 1.11 | 0.15 | 1.4  | 0.41 | 1.18 | 0.35      | 3.52                | 0.2       | At1g37130                                      | nitrate reductase (At1g37130)                                 |          |          |          |          |
| ERD5          | 1.13 | 0.34 | 1.21 | 0.25 | 1.04 | 0.09 | 1.02 | 0.12 | 0.96 | 0.11 | 1.08 | 0.42 | 1.12 | 0.73 | 0.95 | 0.27 | 0.77 | 0.11 | 1.12 | 0.19 | 0.97 | 0.35 | 0.93 | 0.54 | 1.1  | 0.1  | 1.16 | 0.02 | 1.04 | 0.26 | 3.54 | 1.09 | 2.84 | 0.1  | 1.89 | 0.8  | 2.55 | 1.6  | 1.14 | 0.15 | 0.89 | 0.16 | 1.41 | 0.59 | 1.31 | 1.55 | 0.41 | 3.32 | 0.4  | 6.88 | 1.39 | 2.95 | 0.65 | 4.25 | 1.28 | 1.94 | 0.47      | 2.9                 | 0.47      | ATg30775                                       | proline oxidase, mitochondrial precursor (osmotic stress-indu | D83025   | 1.5.3.-  | AV823266 | AV784199 |
| RAFL05-17-E01 | 1.62 | 1.09 | 1.71 | 0.4  | 1.63 | 0.12 | 1.08 | 0.28 | 0.98 | 0.02 | 0.99 | 0.1  | 0.95 | 0.01 | 1.15 | 0.04 | 0.88 | 0.03 | 1.46 | 0.27 | 1.94 | 0.26 | 2.82 | 0.98 | 2.36 | 0.96 | 2.73 | 1.11 | 1.64 | 0.28 | 5.16 | 2.61 | 6.12 | 0.09 | 3.9  | 0.01 | 3.8  | 1.93 | 0.74 | 0.14 | 0.75 | 0.13 | 0.51 | 0.16 | 0.64 | 1.26 | 0.44 | 0.79 | 0.08 | 4.78 | 0.14 | 1.42 | 0.35 | 3.51 | 0.59 | 0.87 | 0.3       | 5.64                | 0.93      | ATg308930                                      | putative chlorophyll a/b-binding protein                      | AY039560 |          | AV821111 | AV781366 |
| RAFL02-02-L10 | 1.05 | 0.87 | 0.58 | 0.12 | 0.37 | 0.03 | 0.21 | 0.03 | 0.11 | 0.03 | 0.14 | 0.04 | 0.24 | 0.02 | 0.22 | 0.05 | 0.16 | 0.02 | 1.94 | 1.73 | 1.96 | 0.27 | 4.46 | 0.15 | 2.9  | 0.03 | 1.5  | 0.06 | 1.9  | 0.27 | 3.07 | 0.06 | 4    | 0.14 | 1.9  | 0.69 | 2.21 | 0.18 | 0.37 | 0.02 | 0.33 | 0.04 | 0.34 | 0.12 | 0.4  | 0.63 | 0.13 | 0.83 | 0.05 | 1.1  | 0.13 | 4.36 | 1.1  | 1.42 | 0.25 | 0.6  | 0.07      | 1.73                | 0.27      | ATg30330                                       | putative photosystem I reaction center subunit II precursor   | AY039565 |          | AV821111 | AV781366 |
| RAFL06-09-F16 | 1.12 | 0.68 | 0.74 | 0.08 | 0.59 | 0.09 | 0.27 | 0.04 | 0.12 | 0    | 0.18 | 0.05 | 0.26 | 0.05 | 0.35 | 0.1  | 0.32 | 0.03 | 1.94 | 1.76 | 2.5  | 0.15 | 6.46 | 0.51 | 6.13 | 0.46 | 3.13 | 0.28 | 1.49 | 0.36 | 1.98 | 0.15 | 2.71 | 0.29 | 1.83 | 0.74 | 2.09 | 0.31 | 0.54 | 0.07 | 0.49 | 0.04 | 0.41 | 0.06 | 0.54 | 0.67 | 0.17 | 0.54 | 0.07 | 0.74 | 0.06 | 3.98 | 0.73 | 1.54 | 0.09 | 0.86 | 0.51      | 1.5                 | 0.03      | ATg309430                                      | putative chlorophyll a/b-binding protein                      | AY065140 |          | AV823835 | AV784900 |
| RAFL02-09-H01 | 1.34 | 1.81 | 0.86 | 0.75 | 0.42 | 0.08 | 0.46 | 0.13 | 0.25 | 0.02 | 0.52 | 0.08 | 0.4  | 0.17 | 0.51 | 0.17 | 0.35 | 0.24 | 2.48 | 0.99 | 2.43 | 0    | 8.86 | 4.76 | 11.1 | 7.59 | 4.95 | 5.91 | 1.97 | 0.79 | 3.86 | 1.75 | 12.7 | 2.16 | 7.11 | 6.09 | 8.82 | 5.85 | 0.97 | 0.26 | 0.69 | 0.04 | 1    | 0.67 | 0.99 | 0.83 | 0.36 | 0.85 | 0.21 | 4.53 | 2.98 | 2.84 | 1.44 | 9.31 | 1.83 | 0.87 | 0.17      | 7.92                | 4.05      | AT4g35770                                      | senescence-associated protein sen1                            | AY078973 |          | AV821198 | AV781512 |
| RAFL04-20-L08 | 1.16 | 0.9  | 0.86 | 0.1  | 0.98 | 0.08 | 0.81 | 0.03 | 0.65 | 0.13 | 0.64 | 0.08 | 0.52 | 0.06 | 0.61 | 0.17 | 0.61 | 0.11 | 1.37 | 0.54 | 0.98 | 0.2  | 1.16 | 0.04 | 1.62 | 0.17 | 2.19 | 0.41 | 0.99 | 0.2  | 1.12 | 0.23 | 1.32 | 0.01 | 2.28 | 0.14 | 3.82 | #### | 0.74 | 0.14 | 0.75 | 0.13 | 0.51 | 0.16 | 0.64 | 1.26 | 0.44 | 0.79 | 0.08 | 4.78 | 0.14 | 1.42 | 0.35 | 3.51 | 0.59 | 0.86 | 0.3       | 5.64                | 0.93      | AT4g36040                                      | senescence-associated protein sen1-like protein; ketoconaz    | AY049302 |          | AV822076 | AV782712 |
| RAFL04-15-D02 | 1.92 | 1.94 | 0.97 | 0.49 | 0.7  | 0.27 | 0.52 | 0.26 | 0.25 | 0.08 | 0.32 | 0.15 | 0.5  | 0.07 | 0.46 | 0.14 | 0.38 | 0.26 | 2.03 | 1.58 | 3.39 | 0.48 | 6.86 | 0.22 | 4.79 | 0.53 | 2.55 | 1.3  | 1.49 | 0.25 | 6.29 | 1.45 | 9.36 | 0.27 | 5.04 | 0.75 | 5.34 | 2.06 | 0.72 | 0.12 | 0.39 | 0.14 | 0.22 | 0.06 | 0.19 | 1.84 | 0.32 | 5.21 | 0.26 | 7.27 | 0.93 | 6.36 | 0.79 | 3.31 | 0.8  | 2.68 | 0.64      | 7.62                | 1.42      | AT5g44020                                      | vegetative storage protein-like                               | AY045786 |          | AV821675 | AV782199 |
| RAFL11-05-H19 | 1.65 | 1.14 | 1.07 | 0.49 | 0.63 | 0.05 | 0.6  | 0.34 | 0.38 | 0.16 | 0.37 | 0.26 | 0.47 | 0.1  | 0.49 | 0.22 | 0.4  | 0.27 | 1.79 | 1.19 | 2.86 | 1.19 | 3.72 | 2.93 | 3.97 | 0.94 | 2.3  | 0.02 | 1.15 | 0.14 | 4.28 | 2.81 | 6.48 | 0.59 | 3.59 | 0.17 | 3.41 | 1.46 | 0.73 | 0.13 | 0.37 | 0.22 | 0.18 | 0.03 | 0.19 | 1.99 | 0.37 | 6.73 | 0.55 | 5.88 | 2.4  | 7.27 | 3.69 | 3.97 | 0.91 | 3.76 | 2.66      | 9.4                 | 1.67      | AT5g44020                                      | vegetative storage protein-like                               | AY054542 |          | AV832189 | AV819550 |
| RAFL07-09-F22 | 1.52 | 1.64 | 1.28 | 1.02 | 1.08 | 0.3  | 1.46 | 0.01 | 1.5  | 1.27 | 0.13 | 1.09 | 0.15 | 1.09 | 0.51 | 0.97 | 0.45 | 1.17 | 1.1  | 1    | 2.58 | 0.58 | 2.27 | 0.04 | 1.68 | 0.97 | 1.09 | 0.28 | 2.97 | 1.52 | 5.6  | 3.14 | 0.67 | 5.41 | 2.17 | 0.8  | 0.06 | 0.67 | 0.17 | 0.76 | 0.23 | 0.93 | 1.43 | 0.1  | 4.93 | 1.52 | 8.2  | 1.68 | 5.86 | 1.12 | 6.85 | 1.52 | 2.38 | 0.67 | 4.76 | 1.58 | AT1g11260 | glucose transporter | AY059781  |  | AV825403  | AV791202 |          |          |          |
| RAFL04-19-A20 | 1.22 | 0.38 | 0.93 | 0.17 | 0.82 | 0.03 | 0.74 | 0.16 | 0.37 | 0.06 | 0.56 | 0.1  | 0.74 | 0.13 | 0.81 | 0.12 | 0.78 | 0.03 | 1.36 | 3.31 | 2.68 | 0.7  | 2.59 | 1.15 | 3.99 | 0.94 | 2.59 | 0.57 | 1.29 | 0.2  | 1.61 | 0.32 | 2.09 | 0.2  | 2.45 | 0.72 | 2.44 | 0.63 | 0.69 | 0.11 | 0.51 | 0.26 | 0.37 | 0.14 | 0.57 | 0.71 | 0.12 | 1.25 | 0.25 | 1.76 | 0.67 | 2.15 | 1.01 | 3.18 | 0.1  | 1.98 | 0.34      | 3.54                | 0.9       | AT1g12110                                      | nitrate/chlorate transporter CHL1                             | AY058204 |          | AV821964 | AV782555 |
| RAFL09-10-H18 | 1.42 | 0.94 | 1.03 | 0.46 | 0.7  | 0.06 | 0.53 | 0.04 | 0.29 | 0.07 | 0.4  | 0.33 | 0.54 | 0.12 | 0.54 | 0.27 | 0.46 | 0.15 | 2.15 | 0.26 | 1.77 | 0.11 | 4.07 | 5.3  | 5.03 | 0.33 | 2.96 | 0.54 | 1.29 | 0.02 | 2.92 | 6.68 | 4.59 | 0.1  | 2.32 | 0.69 | 3.59 | 1.65 | 0.34 | 0.05 | 0.28 | 0.1  | 0.14 | 0.04 | 0.08 | 0.61 | 0.12 | 1.43 | 0.22 | 3.18 | 1.32 | 2.31 | 0.26 | 3.22 | 0.94 | 1.16 | 0.32      | 5.84                | 2.39      | AT1g52190                                      | putative transporter like protein                             | AY058204 |          | AV827017 | AV797041 |
| RAFL11-06-K11 | 1.05 | 0.35 | 1.02 | 0.1  | 1.44 | 0.19 | 1.34 | 0.33 | 1.06 | 0.51 | 1.2  | 0.34 | 1.49 | 0.17 | 1.15 | 0.1  | 1.16 | 0.06 | 1.03 | 0.1  | 1.23 | 0.04 | 1.83 | 0.39 | 1.83 | 0.06 | 3.36 | 0.83 | 1.04 | 0.13 | 1.09 | 0.01 | 1.45 | 0.09 | 1.65 | 0.2  | 2.22 | 0.27 | 1.19 | 0.23 | 1.13 | 0.2  | 0.95 | 0.08 | 0.93 | 1.36 | 0.12 | 1.12 | 0.09 | 1.69 | 0.54 | 2.68 | 0.43 | 3.4  | 1.93 | 1    | 0.18      | 4.88                | 4.19      | AT1g58030                                      | cationic amino acid transporter -related protein              | BT000457 |          |          |          |
| RAFL06-09-M19 | 2.04 | 2.35 | 1.06 | 0.25 | 0.7  | 0.29 | 0.69 | 0.04 | 0.43 | 0.17 | 0.37 | 0.12 | 0.46 | 0    | 0.44 | 0.12 | 0.39 | 0.11 | 1.56 | 1.29 | 1.36 | 0.03 | 2.88 | 0.69 | 5.32 | 1.53 | 5.06 | 1.6  | 1.09 | 0.15 | 2.36 | 0.24 | 3.76 | 4.15 | 0.09 | 8.74 | 1.75 | 0.77 | 0.14 | 0.87 | 0.26 | 0.92 | 0.25 | 0.59 | 1.36 | 0.22 | 0.81 | 0.01 | 2.39 | 0.27 | 6.14 | 1.07 | 4.83 | 1.62 | 0.85 | 0.13 | 6.81      | 1.72                | AT4g23400 | water channel - like protein                   | AY059948  |          | AV823787 | AV784839 |          |
| RAFL09-06-D04 | 1.43 | 1.18 | 0.87 | 0.23 | 0.77 | 0.02 | 0.63 | 0.09 | 0.22 | 0.01 | 0.66 | 0.42 | 0.91 | 0.12 | 0.69 | 0.1  | 0.89 | 0.02 | 2.36 | 0.5  | 4.17 | 0.75 | 6.38 | 1.07 | 5.48 | 0.43 | 5.34 | 0.28 | 1.33 | 0.19 | 1.45 | 0.15 | 1.72 | 0.58 | 1.82 | 0.13 | 1.63 | 0.66 | 0.68 | 0.15 | 0.35 | 0.04 | 0.19 | 0.04 | 0.24 | 0.74 | 0.05 | 1.62 | 0.16 | 2.2  | 0.98 | 1.99 | 0.36 | 1.74 | 0.53 | 0.84 | 0.42      | 6.49                | 1.71      | AT3g14210                                      | myrosinase-associated protein, putative                       | AY062690 |          | AV826666 | AV796013 |
| RAFL05-17-L09 | 1.25 | 0.74 | 1.03 | 0.25 | 1.03 | 0.29 | 0.75 | 0.01 | 0.49 | 0.19 | 0.76 | 0.08 | 0.73 | 0.01 | 0.68 | 0.09 | 0.52 | 0.03 | 1.1  | 0    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |                     |           |  |   |          |          |          |          |

Supplemental Table 4-1-2. Genes up-regulated specifically in the cold deacclimation identified by the 7k microarray analysis<sup>1)</sup>

| Func Gene                                      | Ratio(cold acclimation/Unstressed <sup>2)</sup> |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Ratio(deacclimated after 24hr cold acclimation/ 24hr cold acclimation) <sup>3)</sup> |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Ratio(deacclimated after 168hr cold acclimation/ 168hr cold acclimation) <sup>3)</sup> |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          | Accession Genbank | EC | Accession No. (5 <sup>4)</sup> ) | Accession No. (3 <sup>5)</sup> ) |
|--|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|------|------|------|------------|--------------|-----------------------------------|---|------------------------------------|-----------|----------|----------|-----------|--------------------------|----------|----------|-------------------|----|----------------------------------|----------------------------------|
|  | 1hr   |      |      |      | 2hr  |      |      |      | 5hr  |      |      |      | 10hr |      |      |      | 24hr   |      |      |      | 1hr  |      |      |      | 2hr  |      |      |      | 5hr  |      |      |      | 10hr   |      |      |      | 24hr       |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
|  | Av.   | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | AGI code4) | Annotation5) |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| <b>Regulatory proteins</b>                     |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| <b>F-box protein</b>                           |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL06-08-O23                                  | 0.95  | 0.66 | 0.66 | 0.05 | 0.04 | 0.05 | 0.63 | 0.02 | 0.54 | 0.1  | 0.46 | 0.03 | 0.63 | 0.01 | 0.64 | 0.11 | 0.74   | 0.09 | 1.28 | 0.5  | 1.25 | 0.24 | 2.47 | 0.13 | 3.16 | 0.25 | 2.3  | 0.35 | 0.95 | 0.11 | 1.33 | 0.18 | 2.24   | 0.21 | 1.96 | 0.07 | 2.58       | 0.26         | At2g18280                         | putative Tub family protein                                   | AV823804                           | AV784858  |          |          |           |                          |          |          |                   |    |                                  |                                  |
| <b>Nucleic Acids-related protein</b>           |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL09-14-E12                                  | 1.49  | 0.67 | 1.19 | 0.3  | 1.27 | 0.19 | 0.9  | 0.03 | 0.75 | 0.32 | 0.91 | 0.04 | 1    | 0.03 | 0.83 | 0.02 | 0.8  | 0.01 | 1.94 | 0.18 | 2.2  | 0.42 | 2.25 | 0.39 | 2.2  | 0.4  | 4.24 | 0.89 | 2.07 | 0.28 | 2.62 | 0.61 | 2.22   | 0.16 | 2.8  | 0.34 | 2.44       | 0.78         | At1g07350                         | transformer-SR ribonucleoprotein, putative                    | AY053418                           | AV827345  | AV797912 |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL05-20-P13                                  | 0.91  | 0.77 | 0.54 | 0.12 | 0.59 | 0.39 | 0.54 | 0.13 | 0.33 | 0.05 | 0.5  | 0.04 | 0.45 | 0.06 | 0.44 | 0.08 | 0.5  | 0.1  | 2    | 0.61 | 1.86 | 0.34 | 3.56 | 1.43 | 4.37 | 2.32 | 3.29 | 3.23 | 1.67 | 0.18 | 1.3  | 0.23 | 2.22   | 0.51 | 2.41 | 1.93 | 3.19       | 0.39         | At2g18050                         | histone H1  | AY045797                           | AV823543  | AV784537 |          |           |                          |          |          |                   |    |                                  |                                  |
| <b>Protein phosphatase</b>                     |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL07-13-C02                                  | 1.32  | 0.39 | 1.36 | 0.31 | 1.95 | 0.78 | 1.94 | 0.21 | 1.48 |      |      |      | 2.09 | 0.08 | 1.95 | 0.32 | 2.05   | 0.48 | 3.54 | 2.45 | 1.13 | 0.09 | 1.08 | 0.13 | 0.99 | 0.01 | 0.98 | 0.17 | 1.31 | 0.09 | 1.33 | 0.43 | 4.82   |      | 0.88 |      | 1.14       | 0.07         | At1g10430                         | serine/threonine protein phosphatase, PP2A, catalytic subunit | AY059847                           | 3.1.3.16  | AV825704 | AV792039 |           |                          |          |          |                   |    |                                  |                                  |
| RAFL04-14-C11                                  | 1   | 0.5  | 0.74 | 0.2  | 0.5  | 0.02 | 0.47 | 0.11 | 0.25 | 0.02 | 0.49 | 0.26 | 0.75 | 0.08 | 0.82 | 0.04 | 0.7  | 0.25 | 1.23 | 0.19 | 1.78 | 0.33 | 3.39 | 2.71 | 2.93 | 2.44 | 1.97 | 0.8  | 1.13 | 0.52 | 2.17 | 1.42 | 2.05   | 0.59 | 1.54 | 0.16 | 1.11       | 0.32         | At5g02760                         | protein phosphatase - like protein                            | AV821606                           | AV782114  |          |          |           |                          |          |          |                   |    |                                  |                                  |
| <b>Signaling</b>                               |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL05-07-D07                                  | 2.15  | 2.03 | 0.98 | 0.38 | 0.75 | 0.32 | 0.67 | 0.04 | 0.48 | 0.01 | 0.49 | 0.13 | 0.41 | 0.11 | 0.53 | 0.04 | 0.38   | 0.11 | 2.06 | 2.1  | 1.64 | 0.69 | 5.76 | 0.66 | 5.69 | 0.02 | 5.87 | 2.3  | 1.81 | 0.59 | 3.79 | 0.02 | 8.31   | 0.54 | 5.87 | 3.88 | 9.79       | 2.51         | At5g65930                         | kinesin-like calmodulin-binding protein                       | AY063811                           | AV822414  | AV783173 |          |           |                          |          |          |                   |    |                                  |                                  |
| <b>Transcription factor</b>                    |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL09-07-B02                                  | 1.15  | 0.6  | 0.96 | 0.12 | 0.87 | 0.04 | 0.79 | 0.09 | 0.63 | 0.25 | 0.84 | 0.01 | 0.77 | 0.06 | 0.78 | 0.22 | 0.76   | 1.53 | 0.37 | 1.69 | 0.17 | 1.68 | 0.07 | 2.1  | 0.03 | 3.17 | 0.18 | 1.23 | 0.11 | 1.39 | 0.22 | 1.92 | 0.07   | 2.02 | 0.33 | 2.26 | 0.12       | At5g24800    | bZIP protein BZO2H2               | AV826769  | AV796220                           |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL09-10-N02                                  | 1.41  | 0.91 | 0.87 | 0.15 | 0.69 | 0.11 | 0.87 | 0.08 | 0.55 | 0.19 | 0.73 | 0.09 | 0.8  | 0.08 | 0.77 | 0.18 | 0.74   | 0.14 | 1.88 | 0.29 | 2.26 | 0.61 | 3.36 | 1.79 | 3.14 | 0.66 | 3.68 | 1.36 | 1.47 | 0.06 | 1.85 | 0.31 | 3.22   | 0.09 | 2.73 | 0.69 | 2.39       | 0.5          | At1g14920                         | signal response protein (GAI)                                 | AY058194                           | AV827052  | AV797111 |          |           |                          |          |          |                   |    |                                  |                                  |
| <b>Functional proteins</b>                     |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| <b>Auxin-regulated protein</b>                 |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL05-14-K17                                  | 1.51  | 0.97 | 1.18 | 0.32 | 0.9  | 0.29 | 0.61 | 0.06 | 0.44 | 0.1  | 0.5  | 0.19 | 0.73 | 0.22 | 0.82 | 0.25 | 0.74   | 0.19 | 1.48 | 0.33 | 2.02 | ###  | 2.31 | 0.71 | 3.59 | 1.17 | 2.88 | 1.35 | 1.16 | 0.13 | 1.37 | 0.19 | 1.54   | 0.17 | 1.49 | 0.07 | 2.1        | 0.53         | At4g27260                         | GH3 like protein  | AV823044                           | AV783942  |          |          |           |                          |          |          |                   |    |                                  |                                  |
| <b>Carbohydrate metabolism-related protein</b> |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL08-15-K01                                  | 1.33  | 0.51 | 1.12 | 0.28 | 1.77 | 0.23 | 0.96 | 0.07 | 0.62 | 0.04 | 0.59 | 0.13 | 0.63 | 0.12 | 0.61 | 0.13 | 0.59   | 0.05 | 1.32 | 0.46 | 1.76 | 0.23 | 1.8  | 0.39 | 2.25 | 0.23 | 3.43 | 0.39 | 1.14 | 0.24 | 1.74 | 0.46 | 2.06   | 0.04 | 2.51 | 0.46 | 2.21       | 0.71         | At1g62660                         | putative beta-fructosidase (At1g62660)                        | 3.2.1.26                           | AV826457  | AV795015 |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL07-18-O18                                  | 1.34  | 0.76 | 0.98 | 0.09 | 0.87 |      |      |      |      |      |      |      | 1.08 | 0.89 | 0.1  | 0.88 | 0.14   | 0.85 | 0.15 | 1.97 | 0.59 | 1.58 |      | 1.96 | 1.16 | 2.2  | 0.49 | 1.88 | 0.81 | 1.5  | 0.23 | 2.29 | 0.55   | 3.11 |      | 2.34 | 0.57       | 1.89         | 0.09                              | At4g34138   | glucosyltransferase - like protein | AY056005  | AV826024 | AV793311 |           |                          |          |          |                   |    |                                  |                                  |
| RAFL08-17-J17                                  | 1.14  | 0.56 | 0.93 | 0.03 | 1.27 | 0.07 | 1.21 | 0.07 | 0.93 | 0.18 | 1.17 | ###  | 1.19 | 0.19 | 1.06 | 0.03 | 1.1  | 0.06 | 1.42 | 0.31 | 1.48 | 0.11 | 1.94 | 0.17 | 2    | 0.25 | 3.63 | 0.45 | 1.16 | 0.1  | 1.21 | 0.13 | 1.76   | 0.27 | 1.91 | 0.06 | 2.1        | 0.37         | At1g48430                         | dihydroxyacetone kinase, putative                             | AY026279                           | AV826545  | AV795435 |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL09-13-M20                                  | 1.3   | 0.36 | 1.34 | 0.29 | 0.87 | 0.13 | 0.67 | 0.13 | 0.31 | 0.07 | 0.43 | 0.31 | 0.61 | 0.03 | 0.46 | 0.03 | 0.4  | 0.03 | 1.32 | 0.12 | 1.98 | 0.24 | 2.54 | 0.48 | 2.57 | 0.99 | 3.33 | 2.28 | 1.27 | 0.11 | 1.53 | 0.11 | 1.59   | 0.1  | 1.43 | 0.54 | 2.53       | 0.22         | At1g31070                         | UDP-N-acetylglucosamine pyrophosphorylase-related protein     | AY053411                           | AV827305  | AV797798 |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL05-07-J05                                  | 1.48  | 0.25 | 1.31 | 0.44 | 1.19 | 0.34 | 1.27 | 0.43 | 2.84 | 2.97 | 1.57 | 0.65 | 0.86 | 0.46 | 1.03 | 0.24 | 0.91   | 0.08 | 0.89 | 0.51 | 0.44 | 0.12 | 1.04 | 0.31 | 0.98 | 0.46 | 0.52 | 0.07 | 0.79 | 0.21 | 1.18 |      | 0.304  | 0.69 | 2.11 | 1.42 | 1.37       | 0.43         | At3g43190                         | sucrose synthase like protein                                 | AY034958                           | 2.4.1.13  | AV783221 |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL08-15-L09                                  | 1.16  | 0.52 | 0.96 | 0.18 | 1.11 | 0.15 | 1.21 | 0.22 | 1.2  | 0.47 | 2.07 | 0.93 | 1.24 | 0.34 | 1.18 | 0.29 | 1.45   | 0.47 | 1.69 | 0.25 | 2.05 | 0.03 | 2.13 | 0.36 | 3.7  | 1.11 | 2.63 | 0.71 | 1.07 | 0.2  | 1.33 | 0.47 | 1.7  | 0.1  | 1.99 | 0.47 | 2.33       | 0.01         | At1g54100                         | aldehyde dehydrogenase, putative (ALDH)                       | 1.2.1.-                            | AV826461  | AV795037 |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL09-11-P10                                  | 1.12  | 0.27 | 0.96 | 0.22 | 0.84 | 0.09 | 0.83 | 0.11 | 0.57 | 0.12 | 0.66 | 0.05 | 0.66 | 0.03 | 0.64 | 0.07 | 0.25   | 0.22 | 2.2  | 1.09 | 1.9  | 0.17 | 2.11 | 1.11 | 2.49 | 3.02 | 1.55 | 1.5  | 0.27 | 2.46 | 0.44 | 2.84 | 0.1  | 2.26 | 0.37 | 1.74 | 0.05       | At1g05560    | UDP-Glucose Transferase (UGT75B2) | AF367358  | AV827158                           | AV797396  |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL07-10-G07                                  | 1.14  | 1.21 | 0.76 | 0.2  | 1.1  | 0.15 | 1.22 | 0.59 | 0.61 | 0.16 | 0.44 |      | 0.32 | 0.11 | 0.25 | 0.08 | 0.3  | 0.05 | 1.36 | 0.98 | 0.82 | 0.11 | 0.65 | 0.03 | 0.86 | 0.21 | 0.85 | 0.3  | 1.24 | 0.6  | 1.14 | 0.14 | 1.81   |      | 3.06 | 0.52 | 1.89       | 0.58         | At1g52400                         | beta-glucosidase, putative                                    | BT000797                           | 3.2.1.-   | AV825495 | AV791407 |           |                          |          |          |                   |    |                                  |                                  |
| RAFL05-03-B20                                  | 1.04  | 0.99 | 0.61 | 0.18 | 0.9  | 0.16 | 0.83 | 0.52 | 0.49 | 0.01 | 0.24 | 0.05 | 0.23 | 0.06 | 0.18 | 0.1  | 0.19   | 0.04 | 1.16 | 0.66 | 0.6  | 0.04 | 0.54 | 0.06 | 0.74 | 0.09 | 0.69 | 0.13 | 1.07 | 0.46 | 0.9  | 0.08 | 1.52   | 0.02 | 3.03 | 0.64 | 1.61       | 0.05         | At1g52400                         | beta-glucosidase, putative                                    | AY039855                           | 3.2.1.-   | AV822214 | AV782909 |           |                          |          |          |                   |    |                                  |                                  |
| <b>Cellular metabolism-related protein</b>     |   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL04-20-J15                                  | 1.62  | 0.82 | 1.07 | 0.07 | 0.82 | 0.23 | 0.71 | 0.01 | 0.49 | 0.18 | 0.87 | 0.07 | 0.69 | 0.11 | 0.53 | 0.26 | 0.59   | 0.16 | 2.24 | 0.27 | 1.84 | 0.7  | 1.82 | 0.89 | 1.4  | 0    | 1.39 | 0.29 | 1.92 | 0.34 | 2.26 | 0.03 | 3.09   | 0.17 | 2.35 | 0.69 | 2.28       | 0.08         | At5g40850                         | urophorphyrin III methylase (gb)AAB92676.1)                   | AY079029                           | 2.1.1.107 | AV822066 | AV782698 |           |                          |          |          |                   |    |                                  |                                  |
| RAFL07-15-H08                                  | 1.05  | 0.3  | 0.84 | 0.03 | 0.76 |      |      |      |      |      |      |      | 0.79 | 0.08 | 0.51 | 0.19 | 0.58   | 0.18 | 0.95 | 0.18 | 0.84 | 0.14 | 0.8  | 0.04 | 1.41 | 0.38 | 1.71 |      | 2.76 | 0.13 | 3.02 | 0.56 | 1.95   | 0.33 | 1.49 | 0.45 | 1.72       | 0.27         | 1.78                              | 0.36  | 1.27                               | 0.5       | 1.53     | 0.13     | At1g74470 | geranylgeranyl reductase | AY059860 | AV825826 | AV792532          |    |                                  |                                  |
| RAFL05-14-L16                                  | 1.27  | 0.65 | 0.75 | 0.16 | 0.69 | 0.04 | 0.62 | 0.01 | 0.35 | 0.05 | 0.32 | 0.16 | 0.51 | 0.06 | 0.4  | 0.07 | 0.45   | 0.08 | 1.33 | 0.65 | 0.86 | 0.21 | 2.63 | 0.25 | 3.41 | 0.56 | 2.5  | 0.79 | 1.05 | 0.23 | 1.47 | 0.59 | 3.06   | 0.07 | 2.86 | 0.61 | 2.58       | 0.68         | At3g39820                         | cell elongation protein, Dwarf1                               | AV823053                           | AV783951  |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL09-07-C24                                  | 1.39  | 1.47 | 0.88 | 0.13 | 0.99 | 0.04 | 0.88 | 0.09 | 0.68 | 0.04 | 0.69 | 0.03 | 0.62 | 0.05 | 0.52 | 0.26 | 0.64   | 0.04 | 1.66 | 0.45 | 0.89 | 0.04 | 1.1  | 0.12 | 1.63 | 0.13 | 1.26 | 0.08 | 0.93 | 0.1  | 1.06 | 0.16 | 2.3  | 0.15 | 3.25 | 1.47 | 2.68       | 0.63         | At3g21720                         | putative isocitrate lyase                                     | AY035052                           | AV827395  | AV798088 |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL09-14-O16                                  | 1.2   | 0.51 | 1.03 | 0.15 | 1.56 | 0.72 | 1.09 | 0.29 | 0.55 | 0.53 | 0.44 | 0.08 | 0.48 | 0.15 | 0.4  | 0.15 | 0.3  | 0    | 1.41 | 0.94 | 1.89 | 0.06 | 2.03 | 0.31 | 1.92 | 0.3  | 2.45 | 0.23 | 1.55 | 0.4  | 2.21 | 0.28 | 2.93   | 0.53 | 1.69 | 1.5  | 3.17       | 0.11         | At2g21900                         | putative serine carboxypeptidase                              | AV823062                           | AV783966  |          |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL05-14-N11                                  | 1.49  | 0.39 | 1.27 | 0.19 | 0.8  | 0.02 | 0.6  | 0.1  | 0.48 | 0.07 | 0.52 | 0.14 | 0.62 | 0.17 | 0.59 | 0.01 | 0.51   | 0.07 | 1.14 | 0.52 | 1.41 | 0.16 | 1.66 | 0.48 | 1.44 | 0.52 | 1.98 | 0.08 | 1.19 | 0.15 | 1.88 | 0.04 | 3.17   | 0.68 | 1.86 | 0.61 | 2.1        | 0.95         | At1g66200                         | glutamine synthetase, putative                                | AY058881                           | AV823062  | AV783966 |          |           |                          |          |          |                   |    |                                  |                                  |
| RAFL09-09-C24                                  | 1.32  | 0.73 | 1.06 | 0.27 | 0.92 | 0.2  | 1.08 | 0.01 | 0.74 | 0.1  | 0.93 | 0.08 | 0.99 | 0.03 | 1    | 0.36 | 1  | 0.26 | 1.48 | 0.7  | 1.48 | 0.06 | 2.55 | 0.27 | 2.82 | 1.14 | 2.2  | 0.49 | 1.07 | 0.15 | 1.97 | 0.47 | 3.47   | 0.08 | 2.54 | 0.09 | 2.79       | 0.86         | At2g31810                         | acetylactate synthase like protein                            | AY113848                           | 2.6.1.5   | AV822576 | AV796666 |           |                          |          |          |                   |    |                                  |                                  |
| RAFL09-09-B02                                  | 1.75  | 1.27 | 1.05 | 0.1  | 1.18 | 0.42 | 1.03 | 0.08 | 0.85 | 0.12 | 0.83 | 0.03 | 0.84 | 0.01 | 0.84 | 0.06 | 0.81   | 0.18 | 1.57 | 1    | 1.28 | 0.37 | 2.63 | 0.29 | 3.71 | 0.06 | 2.93 | 0.56 | 1.4  | 0.22 | 2.1  | 0.12 | 3.44   | 0.68 | 2.85 | 0.67 | 4.13       | 1.05         | At5g53970                         | tyrosine aminotransferase                                     | AF136480                           | 6.3.5.4   | AV827137 | AV797334 |           |                          |          |          |                   |    |                                  |                                  |
| RAFL09-11-L03                                  | 1.19  | 0.26 | 1.28 | 0.22 | 1.22 | 0.16 |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |            |              |                                   |   |                                    |           |          |          |           |                          |          |          |                   |    |                                  |                                  |



Supplemental Table 4-1-4. Genes up-regulated specifically in the rehydration identified by the 7k microarray analysis)

| Function                             | Gene           | Ratio(Dehydration/Unstressed)2) |      | Ratio(Rehydration after dehydration/ 2hr dehydration)3) |      |      |      |      |      |      |      |      |      | Ratio(Rehydration after dehydration/ 5hr dehydration)3) |      | Accession Genbank | EC   | Accession No. (5) <sup>6</sup> | Accession No. (3) <sup>7</sup> |      |      |            |             |   |          |          |          |          |
|--------------------------------------|----------------|---------------------------------|------|---|------|------|------|------|------|------|------|------|------|---|------|-------------------|------|--------------------------------|--------------------------------|------|------|------------|-------------|---|----------|----------|----------|----------|
|                                      |                | 1hr                             |      | 2hr   |      | 5hr  |      | 10hr |      | 24hr |      | 2hr  |      | 24hr  |      |                   |      |                                |                                |      |      |            |             |   |          |          |          |          |
|                                      |                | Av.                             | Std. | Av.   | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.   | Std. |                   |      |                                |                                | Av.  | Std. | AGI code#4 | Annotations |   |          |          |          |          |
| <b>Regulatory proteins</b>           |                |                                 |      |   |      |      |      |      |      |      |      |      |      |   |      |                   |      |                                |                                |      |      |            |             |   |          |          |          |          |
| <b>F-box protein</b>                 |                |                                 |      |   |      |      |      |      |      |      |      |      |      |   |      |                   |      |                                |                                |      |      |            |             |   |          |          |          |          |
|                                      | RAFLO6-09-N04  | 1.09                            | 0.1  | 1.22  | 0.19 | 3.25 | 0.29 | 3.86 | 1.56 | 0.27 | 3.51 | 0.5  | 5.18 | 0.9   | 2.44 | 0.4               | 3.8  | 0.4                            | 2.66                           | 0.58 | 0.9  | 0.29       | A15g48180   | Kelch repeats protein family                      | AY059952 |          |          | AV784948 |
|                                      | RAFLO5-10-O23  | 0.22                            | 0.04 | 0.4   | 0.13 | 0.98 | 0.38 | 0.7  | 1.1  | 0.12 | 2.24 | 0.26 | 2.4  | 3.43  | 3.13 | 0.1               | 2.38 | 0.34                           | 0.74                           | 0.11 | 1.73 | 0.67       | A11g23390   | unknown protein                                   | AY120706 |          | AV822733 | AV783557 |
|                                      | RAFLO11-12-O18 | 1.06                            | 0.06 | 0.75  | 0.21 | 0.7  | 0.07 | 0.46 | 1.33 | 0.23 | 2.19 | 0.28 | 2.88 | 0.77  | 3.37 | 3.47              | 5.95 | 5.51                           | 1.86                           | 0.97 | 3.41 | 3.33       | A12g02870   | Kelch repeat containing F-box protein family      | AY139977 |          | AV832362 | AV820897 |
|                                      | RAFLO7-08-O14  | 1.01                            | 0.06 | 0.82  | 0.15 | 0.69 | 0.15 | 1.21 | 1.54 | 0.32 | 3.97 | 0.54 | 1.78 | 0.02  | 1.16 | 0.25              | 0.9  | 0.24                           | 3.05                           | 2.36 | 1.23 | 0.2        | A12g02870   | Kelch repeat containing F-box protein family      | AY139977 |          | AV832362 | AV791115 |
| <b>Nucleic Acids-related protein</b> |                |                                 |      |   |      |      |      |      |      |      |      |      |      |   |      |                   |      |                                |                                |      |      |            |             |   |          |          |          |          |
|                                      | RAFLO5-16-P20  | 0.48                            | 0.26 | 0.4   | 0.05 | 0.26 | 0.1  | 0.21 | 1.64 | 0.36 | 3.3  | 0.56 | 2.1  | 1.54  | 1.39 | 0.28              | 3.82 | 0.24                           | 3.68                           | 3.85 | 5.2  | 1.77       | A11g06760   | histone H1 like protein                           | AY050452 |          | AV823240 | AV784172 |
|                                      | RAFLO5-14-B16  | 1.11                            | 0.31 | 1.33  | 0.21 | 1.22 | 0.26 | 0.97 | 1.9  | 0.11 | 1.28 | 0.2  | 2.27 | 0.71  | 2.71 | 1.1               | 2.81 | 1.64                           | 1.29                           | 0.49 | 3.28 | 1.32       | A11g52740   | putative histone H2A                              | AY058147 |          | AV824140 | AV785301 |
|                                      | RAFLO5-15-J08  | 0.6                             | 0.02 | 0.51  | 0.07 | 0.28 | 0.09 | 0.24 | 1.3  | 0.43 | 2.77 | 0.23 | 2.49 | 0.65  | 2.12 | 1.36              | 2.38 | 0.78                           | 3.62                           | 0.88 | 3.64 | 0.69       | A12g30620   | putative histone H1 protein                       | AF360211 |          | AV827449 | AV798261 |
|                                      | RAFLO4-09-B22  | 1.23                            | 0.46 | 1.58  | 0.39 | 1.13 | 0.3  | 1.88 | 1.88 | 0.54 | 1.95 | 0.79 | 2.25 | 0.77  | 2.29 | 0.68              | 1.84 | 0.08                           | 1.28                           | 0.69 | 3.26 | 1.74       | A13g46030   | histone H2B-like protein                          | AY058147 |          | AV821359 | AV781782 |
|                                      | RAFLO5-03-P16  | 0.86                            | 0.1  | 1.11  | 0.29 | 1.05 | 0.38 | 0.82 | 1.24 | 0.2  | 1.15 | 0.26 | 1.64 | 0.12  | 1.31 | 0.44              | 1.67 | 0.55                           | 1.15                           | 0.26 | 3.13 | 1.56       | A14g40030   | histone H3.3                                      | AF385735 |          | AV822260 | AV782971 |
| <b>Protein kinase</b>                |                |                                 |      |   |      |      |      |      |      |      |      |      |      |   |      |                   |      |                                |                                |      |      |            |             |   |          |          |          |          |
|                                      | RAFLO7-12-G24  | 0.89                            | 0.12 | 0.48  | 0.15 | 0.24 | 0.14 | 0.29 | 1.48 | 0.49 | 2.64 | 0.02 | 2.42 | 0.98  | 1.95 | 0.51              | 2.22 | 0.42                           | 2.3                            | 0.46 | 3.68 | 0.28       | A14g39400   | brassinosteroid insensitive 1 gene (BR11)         | AY059952 |          | AV825660 | AV791881 |
|                                      | RAFLO9-17-D13  | 0.77                            | 0.24 | 0.47  | 0.12 | 0.52 | 0.04 | 0.43 | 1.16 | 0.25 | 1.65 | 0.21 | 2.03 | 0.24  | 5.16 | 1.01              | 3.52 | 0.84                           | 0.87                           | 0.07 | 2.61 | 0.36       | A13g45780   | nonphotosynthetic phycoeytolin 1 (NPH1)           | AF360218 | 2.7.1.37 | AV827583 | AV798698 |
|                                      | RAFLO7-14-H20  | 3.98                            | 0.9  | 3.01  | 1.36 | 4.43 | 2.09 | 6.68 | 0.76 | 0.34 | 0.77 | 0.11 | 0.31 | 0.02  | 0.72 | 0.29              | 0.61 | 0.15                           | 3.59                           | 1.57 | 0.35 | 0.13       | A15g63370   | protein kinase                                    | AY062461 |          | AV826261 | AV792325 |
|                                      | RAFLO4-09-B05  | 1.21                            | 0.21 | 0.92  | 0.1  | 1.04 | 0.51 | 0.92 | 1.11 | 0.29 | 1.19 | 0.07 | 0.34 | 0.44  | 3.34 | 0.51              | 3.53 | 0.95                           | 0.9                            | 0.1  | 2.91 | 0.25       | A11g09570   | putative phytochrome A                            | AY039520 |          | AV821357 |          |
|                                      | RAFLO9-14-G19  | 3.71                            | 1.25 | 2   | 0.62 | 1.43 | 0.31 | 2.78 | 2.57 | 0.67 | 2.02 | 0.3  | 1.35 | 0.61  | 0.95 | 0.62              | 0.93 | 0.4                            | 3.18                           | 1.28 | 1.07 | 0.36       | A13g02880   | putative protein kinase                           | AF372969 |          | AV797949 |          |
|                                      | RAFLO6-10-G14  | 0.97                            | 0.06 | 0.98  | 0.16 | 0.68 | 0.3  | 0.72 | 1.16 | 0.21 | 1.44 | 0.05 | 1.31 | 0.67  | 0.98 | 0.58              | 2.24 | 1.35                           | 1.29                           | 0.14 | 1.76 | 0.65       | A11g60940   | putative serine/threonine-protein kinase          | AY072340 |          | AV785012 |          |
|                                      | RAFLO8-16-D08  | 2.09                            | 0.39 | 1.09  | 0.18 | 0.68 | 0.24 | 0.75 | 2.08 | 0.22 | 3.17 | 0.43 | 2.05 | 0.19  | 1.09 | 0.07              | 1.03 | 0.26                           | 4.23                           | 1.14 | 1.87 | 1.11       | A14g26690   | unknown protein                                   | AY056280 |          | AV826483 | AV795145 |
| <b>Protein phosphatase</b>           |                |                                 |      |   |      |      |      |      |      |      |      |      |      |   |      |                   |      |                                |                                |      |      |            |             |   |          |          |          |          |
|                                      | RAFLO7-14-E15  | 0.61                            | 0.1  | 0.66  | 0.19 | 0.4  | 0.07 | 0.32 | 1.41 | 0.17 | 2.01 | 0.3  | 2.94 | 0.95  | 2.13 | 0.21              | 1.57 | 0.18                           | 1.51                           | 0.11 | 3.77 | 0.81       | A14g38520   | putative protein phosphatase-2c                   | AY062454 |          | AV825758 | AV792278 |
| <b>Signaling</b>                     |                |                                 |      |   |      |      |      |      |      |      |      |      |      |   |      |                   |      |                                |                                |      |      |            |             |   |          |          |          |          |
|                                      | RAFLO5-02-M11  | 0.62                            | 0.03 | 0.61  | 0.11 | 0.54 | 0.08 | 0.59 | 0.88 | 0.18 | 0.96 | 0.03 | 1.94 | 0.65  | 1.65 | 0.68              | 3.26 | 0.16                           | 0.82                           | 0.43 | 3.6  | 0.35       | A15g10450   | 14-3-3-like protein AFT1                          | AY037248 |          | AV822189 | AV782876 |
|                                      | RAFLO6-11-H17  | 13.8                            | 5.96 | 4.24  | 0.85 | 4.58 | 0.85 | 8.76 | 3.23 | 0.2  | 1.01 | 0.13 | 0.43 | 0.05  | 0.53 | 0.21              | 0.33 | 0.14                           | 2.07                           | 0.61 | 0.21 | 0.02       | A11g76650   | calmodulin like protein                           | BT002421 |          | AY120719 |          |
|                                      | RAFLO5-12-B21  | 4.76                            | 2.04 | 3.36  | 0.89 | 2.45 | 0.73 | 6.37 | 2.29 | 0.32 | 2.99 | 0.44 | 1.73 | 0.65  | 0.83 | 0.08              | 0.69 | 0.25                           | 3.69                           | 1.45 | 1.08 | 0.23       | A12g41100   | calmodulin-like protein                           | AF360307 |          | AV822819 | AV783672 |
|                                      | RAFLO9-17-D19  | 1.65                            | 0.68 | 1.18  | 0.38 | 1.55 | 0.1  | 1.96 | 5.84 | 0.59 | 4.97 | 0.46 | 5.16 | 1   | 3.14 | 0.16              | 2.9  | 1.24                           | 1.73                           | 0.27 | 2.38 | 0.6        | A12g41410   | calmodulin-like protein                           | AF360307 |          | AV827584 | AV798703 |
| <b>Transcription factor</b>          |                |                                 |      |   |      |      |      |      |      |      |      |      |      |   |      |                   |      |                                |                                |      |      |            |             |   |          |          |          |          |
|                                      | RAFLO8-08-P22  | 1.02                            | 0.35 | 1.01  | 0.37 | 1.25 | 0.16 | 1.55 | 1.28 | 0.07 | 1.26 | 0.19 | 1.83 | 0.16  | 1.51 | 0.26              | 3.24 | 2.51                           | 0.88                           | 0.17 | 2    | 0.78       | A13g16857   | ARR1 protein, putative, 5' partial                | AY056099 |          | AV826080 | AV793514 |
|                                      | RAFLO5-20-N17  | 0.71                            | 0.29 | 0.42  | 0.14 | 0.74 | 0.05 | 0.58 | 0.6  | 0.02 | 0.62 | 0.12 | 0.68 | 0.02  | 0.09 | 0.92              | 1.51 | 0.25                           | 0.63                           | 0.27 | 0.82 | 0.27       | A12g46830   | CCA1  | AY050961 |          | AV823536 | AV784525 |
|                                      | RAFLO5-09-H09  | 0.52                            | 0.28 | 0.74  | 0.33 | 1.28 | 0.41 | 1.2  | 0.76 | 0.07 | 0.97 | 0.04 | 1.35 | 0.43  | 3.56 | 0.26              | 2.13 | 0.62                           | 1.02                           | 0.41 | 1.22 | 0.21       | A15g57660   | CONSTANS-like B-box zinc finger protein-like      | AY080747 |          | AV827261 | AV785301 |
|                                      | RAFLO5-21-N20  | 0.22                            | 0.02 | 0.44  | 0.04 | 1    | 0.09 | 1.08 | 1.61 | 0.45 | 3.37 | 0.62 | 2.06 | 1.06  | 2.34 | 1.24              | 2.31 | 0.3                            | 1.01                           | 0.57 | 0.84 | 0.16       | A15g61590   | ethylene responsive element binding factor - like | AY045968 |          | AV823620 |          |
|                                      | RAFLO3-07-K19  | 0.54                            | 0.25 | 0.56  | 0.12 | 0.48 | 0.03 | 0.35 | 0.94 | 0.06 | 1.22 | 0.06 | 5.1  | 0.7   | 2.37 | 0.78              | 1.8  | 0.32                           | 0.7                            | 0.21 | 2.48 | 0.62       | A12g360530  | GATA transcription factor 4                       | AF378881 |          | AV821360 | AV781699 |
|                                      | RAFLO9-10-M04  | 0.58                            | 0.07 | 0.41  | 0.07 | 0.55 | 0.18 | 0.66 | 1.39 | 0.24 | 2.62 | 0.22 | 3.04 | 0.16  | 1.86 | 0.53              | 1.55 | 1.48                           | 1.12                           | 0.55 | 3.71 | 0.83       | A13g01470   | homeobox transcription factor (HAT5)              | AY058188 |          | AV827043 | AV797096 |
|                                      | ATMY-B2        | 1.07                            | 0.14 | 1.19  | 0.3  | 1.15 | 0.37 | 2.85 | 1.36 | 0.42 | 3.67 | 0.56 | 1.45 | 0.22  | 0.96 | 0.33              | 0.94 | 0.3                            | 2.06                           | 0.89 | 1.5  | 0.88       | A12g47190   | MYB transcription factor (Atmyb2)                 | D14712   |          | AV827043 | AV797096 |
|                                      | RAFLO5-13-H06  | 0.73                            | 0.12 | 1.3   | 0.08 | 1.89 | 0.23 | 1.66 | 1.3  | 0.21 | 1.82 | 0.16 | 2.15 | 0.82  | 5.13 | 0.8               | 3.02 | 0.57                           | 1.16                           | 0.24 | 1.99 | 1.06       | A13g59060   | putative bHLH transcription factor (bHLH065)      | AY081271 |          | AV822945 | AV783824 |
|                                      | RAFLO4-10-F17  | 0.61                            | 0.11 | 0.64  | 0.28 | 0.59 | 0.11 | 0.4  | 5.53 | 1.9  | 4.24 | 1.35 | 4.35 | 1.53  | 2.22 | 0.53              | 1.2  | 0.13                           | 1.86                           | 0.11 | 1.53 | 0.69       | A13g56400   | putative DNA-binding protein                      | AY039933 |          | AV821440 | AV781892 |
|                                      | RAFLO9-16-K13  | 0.68                            | 0.12 | 0.82  | 0.57 | 0.63 | 0.13 | 0.53 | 2.78 | 0.51 | 3.31 | 0.77 | 2.5  | 0.34  | 1.99 | 0.36              | 2.75 | 0.45                           | 2.22                           | 1.19 | 2.47 | 0.56       | A11g68840   | putative DNA-binding protein RAV2                 | AF360312 |          | AV827543 | AV798550 |
|                                      | RAFLO8-13-K22  | 0.48                            | 0.03 | 0.56  | 0.14 | 1.23 | 0.53 | 1.16 | 2.47 | 0.51 | 3.63 | 0.45 | 2.55 | 1.09  | 1.26 | 0.1               | 3.84 | 1.24                           | 1.69                           | 1.3  | 1.28 | 0.33       | A11g25560   | putative protein                                  | AY056169 |          | AV826377 | AV794624 |
|                                      | RAFLO9-15-L21  | 0.82                            | 0.08 | 0.73  | 0.21 | 0.83 | 0.25 | 0.82 | 0.75 | 0.08 | 0.5  | 1.12 | 0.56 | 1.02  | 6.02 | 0.32              | 2.45 | 0.24                           | 1.67                           | 0.4  | 1.39 | 0.12       | A12g43010   | putative transcription factor BHLH9               | AF360221 |          | AV827464 | AV798303 |
|                                      | RAFLO5-20-N02  | 0.66                            | 0.07 | 0.64  | 0.05 | 1.19 | 0.06 | 0.9  | 0.63 | 0.12 | 1.27 | 0.09 | 0.92 | 0.25  | 3.79 | 1.7               | 2.77 | 0.35                           | 1.28                           | 0.47 | 1.56 | 0.43       | A11g06040   | salt-tolerance protein                            | AY045794 |          | AV823532 | AV784521 |
|                                      | RAFLO11-05-O04 | 0.91                            | 0.23 | 0.73  | 0.14 | 0.72 | 0.18 | 0.69 | 1.45 | 0.19 | 3.47 | 0.23 | 2.57 | 0.47  | 2.5  | 0.31              | 2.2  | 0.15                           | 1.56                           | 0.56 | 2.15 | 0.39       | A13g14230   | transcription factor EREBP like protein           | AF054539 |          | AV832199 | AV819604 |
|                                      | RAFLO4-15-E14  | 1.02                            | 0.09 | 0.9   | 0.12 | 0.63 | 0.22 | 0.52 | 0.87 | 0.23 | 0.71 | 0.13 | 1.56 | 0.46  | 1.61 | 0.43              | 2.99 | 0.91                           | 0.78                           | 0.13 | 3.12 | 0.16       | A11g20685   | unknown protein                                   | AF370248 |          | AV821687 | AV822144 |
|                                      | RAFLO7-09-D05  | 0.87                            | 0.09 | 0.58  | 0.09 | 0.41 | 0.04 | 0.41 | 0.95 | 0.05 | 0.91 | 0.24 | 3.03 | 1.3   | 2.04 | 0.17              | 1.49 | 0.3                            | 1.43                           | 0.38 | 2.28 | 0.2        | A13g60320   | bZIP like protein                                 | AY059759 |          | AV825393 | AV791171 |
|                                      | RAFLO5-07-N24  | 0.84                            | 0.23 | 0.7   | 0.19 | 0.74 | 0.1  | 0.55 | 0.7  | 0.07 | 0.83 | 0.04 | 1.79 | 0.43  | 1.47 | 0.66              | 3.19 | 1.14                           | 1.63                           | 0.47 | 2.02 | 0.04       | A13g61260   | putative DNA-binding protein                      | AF370346 |          | AV822480 | AV783258 |
|                                      | RAFLO8-18-O11  | 4.12                            | 1.42 | 2.21  | 0.65 | 2.72 | 0.44 | 3.17 | 3.2  | 1.11 | 1.51 | 0.1  | 0.81 | 0.02  | 0.67 | 0                 |      |                                |                                |      |      |            |             |   |          |          |          |          |

| Gene ID                 | Expression Ratio | Gene Name | Function | Accession | EC   | Other                        |
|-------------------------|------------------|-----------|----------|-----------|------|------------------------------|
| <b>Membrane protein</b> |                  |           |          |           |      |                              |
| RAFL06-07-E23           | 0.95             | 0.22      | 0.84     | 0.11      | 0.8  | 0.08 0.57                    |
| RAFL06-16-E03           | 1.05             | 0.02      | 0.42     | 0.1       | 0.32 | 0.06 0.32                    |
| RAFL11-12-C05           | 1.18             | 0.07      | 0.55     | 0.14      | 0.38 | 0.16 1.01                    |
| RAFL06-07-E23           | 1.31             | 0.08      | 1.45     | 0.15      | 2.25 | 0.22 3.07 0.48 3.05 0.3      |
| RAFL06-16-E03           | 1.26             | 0.13      | 3.49     | 0.3       | 4.04 | 0.88 3.53 0.22 3.83 0.8      |
| RAFL11-12-C05           | 1.58             | 0.31      | 3.83     | 0.83      | 4.11 | 1.02 2.11 0.62 4.8 2.78      |
| RAFL06-07-E23           | 0.99             | 0.08      | 3.48     | 0.64      | 4.14 | 0.33 1.59 6.9 1.86 A14g32150 |
| RAFL06-16-E03           | 2.33             | 0.76      | 5.82     | 0.54      | 4.04 | 0.20 2.06 0.54 A14g20260     |
| RAFL11-12-C05           | 3.3              | 1.59      | 6.9      | 1.86      | 4.14 | 0.33 1.59 6.9 1.86 A14g20260 |
| RAFL06-07-E23           | 0.87             | 0.47      | 0.89     | 0.7       | 4.03 | 3.84 2.26 2.13 3.64 3.23     |
| RAFL06-07-E23           | 1.45             | 0.46      | 2.41     | 0.23      | 4.87 | 1.85 5.62 1.06 4.83 5.75     |
| RAFL06-07-E23           | 0.54             | 0.06      | 0.49     | 0.04      | 0.36 | 0.03 9.52 2.82 1.01 0.35     |
| RAFL06-07-E23           | 0.96             | 0.09      | 0.56     | 0.07      | 0.25 | 0.11 5.13 0.23 0.56 0.5      |
| RAFL06-07-E23           | 0.75             | 0.19      | 0.48     | 0.06      | 0.36 | 0.15 1.53 0.74 0.81 0.1      |
| RAFL06-07-E23           | 0.67             | 0.07      | 0.53     | 0.03      | 0.24 | 0.06 2.99 6.3 1.09 0.55      |
| RAFL06-07-E23           | 0.56             | 0.14      | 0.31     | 0.08      | 0.38 | 0.03 9.84 6.31 0.91 0.31     |
| RAFL06-07-E23           | 1.01             | 0.18      | 0.48     | 0.07      | 0.02 | 0.07 3.94 0.77 0.77 0.48     |
| RAFL06-07-E23           | 0.49             | 0.07      | 0.34     | 0.09      | 0.18 | 0.03 4.19 2.05 0.64 0.1      |
| RAFL06-07-E23           | 0.58             | 0.08      | 0.35     | 0.02      | 0.36 | 0.07 6.04 1.56 1.14 0.22     |
| RAFL06-07-E23           | 1.07             | 0.32      | 1.73     | 0.14      | 2.01 | 0.08 3.79 0.55 1.47 0.44     |
| RAFL06-07-E23           | 0.48             | 0.14      | 0.24     | 0.02      | 0.05 | 0.26 2.87 0.71 0.07          |
| RAFL06-07-E23           | 0.64             | 0.13      | 0.61     | 0.13      | 0.24 | 0.11 3.84 0.4 0.54 0.11      |
| RAFL06-07-E23           | 0.86             | 0.02      | 0.55     | 0.11      | 0.27 | 0.1 4.06 1.1 0.49 0.11       |
| RAFL06-07-E23           | 0.71             | 0.13      | 0.49     | 0.09      | 0.24 | 0.08 6.16 0.7 1.13 0.19      |
| RAFL06-07-E23           | 0.87             | 0.06      | 0.46     | 0.05      | 0.24 | 0.06 3.87 2.27 1.07 0.36     |
| RAFL06-07-E23           | 0.62             | 0.04      | 0.36     | 0.08      | 0.27 | 0.03 6.59 0.8 1.08 0.1       |
| RAFL06-07-E23           | 0.6              | 0.08      | 0.47     | 0.07      | 0.21 | 0.07 3.41 0.94 1.19 0.3      |
| RAFL06-07-E23           | 0.92             | 0.19      | 1.08     | 0.22      | 0.15 | 0.22 A15g54270               |
| RAFL06-07-E23           | 1.35             | 0.23      | 0.65     | 0.14      | 1.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.23      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.34             | 0.38      | 1.1      | 0.39      | 0.11 | 0.39 A14g29920               |
| RAFL06-07-E23           | 1.23             | 0.11      | 1.28     | 0.7       | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 0.86             | 0.09      | 1.23     | 0.64      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.19             | 0.11      | 1.02     | 0.38      | 0.12 | A12g34420                    |
| RAFL06-07-E23           | 1.17             | 0.19      | 0.73     | 0.2       |      |                              |





Supplemental Table 4-2-2. Genes down-regulated specifically in the cold deacclimation identified by the 7k microarray analysis<sup>1)</sup>

| Function                                       | Ratio(cold acclimation/Unstressed) z |      |      |      |      |      |      |       |       |      |      |      |      |      | Ratio(cold deacclimation after 24hr cold acclimation/ 24hr cold acclimation) |      |       |      |      |      |      |      |      |      |            |               |       |       | Ratio(cold deacclimation after 168hr cold acclimation/ 168hr cold acclimation) |       |       |       |       |       |       |          |          |   |  |  |          |          | Accession Genbank | Accession No. (5) <sup>2)</sup> | Accession No. (3) <sup>3)</sup> |
|--|--------------------------------------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|--|------|-------|------|------|------|------|------|------|------|------------|---------------|-------|-------|--|-------|-------|-------|-------|-------|-------|----------|----------|---|--|--|----------|----------|-------------------|---------------------------------|---------------------------------|
|  | 1hr                                  | 2hr  | 5hr  | 10hr | 24hr | 48hr | 96hr | 144hr | 168hr | 1hr  | 2hr  | 5hr  | 10hr | 24hr | 1hr  | 2hr  | 5hr   | 10hr | 24hr | 1hr  | 2hr  | 5hr  | 10hr | 24hr | AGI code4) | Annotations5) |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |
| <b>Regulatory proteins</b>                     |                                      |      |      |      |      |      |      |       |       |      |      |      |      |      |  |      |       |      |      |      |      |      |      |      |            |               |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |
| <b>F-box protein</b>                           |                                      |      |      |      |      |      |      |       |       |      |      |      |      |      |  |      |       |      |      |      |      |      |      |      |            |               |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |
| RAF105-08-B11                                  | 0.88                                 | 0.52 | 1    | 0.23 | 0.98 | 0.11 | 1.88 | 2.3   | 5.65  | 0.8  | 2.16 | 0.94 | 0.97 | 0.05 | 1.27   | 0.01 | 0.24  | 0.01 | 1    | 0.04 | 0.61 | 0.1  | 0.37 | 0.07 | 0.28       | 0.02          | 0.27  | 0.05  | 0.268  | 0.034 | 0.171 | 0.197 | 0.83  | 0.188 | 0.824 | 0.047    | 0.871    | 0.36  | AD361060                                     | unknown protein  | AY034967 | AV783283 |                   |                                 |                                 |
| RAF105-18-B18                                  | 0.76                                 | 0.11 | 1.41 | 0.5  | 0.52 | 1.8  | 1.76 | 2.06  | 1.49  | 0.56 | 1.63 | 0.53 | 0.49 | 0.74 | 0.2  | 0.28 | 0.3   | 0.03 | 0.49 | 0.14 | 0.38 | 0.3  | 0.16 | 0.41 | 0.07       | 0.01          | 0.01  | 0.528 | 0.314  | 0.069 | 0.065 | 0.348 | 0.122 | 0.613 | 0.158 | 0.33     | 0.16     | AT169850  | unknown protein                              | AY034969   | AV825966 | AV783299 |                   |                                 |                                 |
| <b>Nucleic Acids-related protein</b>           |                                      |      |      |      |      |      |      |       |       |      |      |      |      |      |  |      |       |      |      |      |      |      |      |      |            |               |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |
| RAF104-12-A15                                  | 0.69                                 | 0.37 | 1    | 0.18 | 1.13 | 1.1  | 2.25 | 0.98  | 7.31  | 7.6  | 2.34 | 0.23 | 1.55 | 0.28 | 2.09   | 0.74 | 1.75  | 0.76 | 0.33 | 0.08 | 0.24 | 0.12 | 0.18 | 0.05 | 0.16       | 0.04          | 0.188 | 0.062 | 0.135  | 0.067 | 0.33  | 0.246 | 0.228 | 0.02  | 0.414 | 0.01     | AD355580 | regulator of chromosome condensation-like protein |  | AV821512   | AV781998 |          |                   |                                 |                                 |
| <b>Protein kinase</b>                          |                                      |      |      |      |      |      |      |       |       |      |      |      |      |      |  |      |       |      |      |      |      |      |      |      |            |               |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |
| RAF105-16-G12                                  | 1.11                                 | 0.8  | 1.43 | 0.23 | 0.96 | 0.22 | 1.01 | 1.14  | 2.53  | 1.15 | 2.59 | 0.97 | 1.36 | 1.8  | 0.24   | 0.59 | 0.13  | 1.36 | 0.32 | 0.61 | 0.07 | 0.53 | 0.19 | 0.31 | 0.01       | 0.38          | 0.08  | 0.463 | 0.001  | 0.183 | 0.02  | 0.502 | 0.2   | 0.542 | 0.023 | 0.802    | 0.08     | At1g78290   | protein kinase I like protein                | AF411782   | AV82184  |          |                   |                                 |                                 |
| RAF105-14-A21                                  | 0.92                                 | 0.17 | 0.87 | 0.96 | 0.71 | 0.93 | 0.55 | 1.56  | 1.26  | 1.08 | 2.34 | 0.67 | 1.2  | 1.34 | 0.07   | 0.29 | 0.06  | 1.44 | 0.08 | 0.47 | 0.27 | 0.23 | 0.05 | 0.24 | 0.09       | 0.31          | 0.09  | 0.221 | 0.016  | 0.103 | 0.044 | 1.761 | 1.481 | 0.242 | 1.028 | 0.35     | AD359350 | protein kinase-like protein                       | AY054639                                     | AV82287  | AV783872 |          |                   |                                 |                                 |
| RAF111-11-C18                                  | 0.67                                 | 0.1  | 1.67 | 0.26 | 0.87 | 0.26 | 1.36 | 0.52  | 2.91  | 3.69 | 2.68 | 0.34 | 0.22 | 0.25 | 0.29   | 0.76 | 0.52  | 0.64 | 0.92 | 0.25 | 0.73 | 0.52 | 0.01 | 0.1  | 0.18       | 0.26          | 0.07  | 0.387 | 0.033  | 0.085 | 0.073 | 0.394 | 0.165 | 0.469 | 0.143 | 0.373    | 0.14     | AY010290  | protein serine/threonine kinase-like protein | AY030329   | AV82312  | AV820577 | AV784142          |                                 |                                 |
| RAF105-16-K11                                  | 0.61                                 | 0.39 | 0.86 | 0.12 | 1.28 | 0.18 | 1.85 | 0.65  | 4.47  | 1.74 | 4.06 | 1.29 | 1.70 | 0.33 | 2.74   | 1.04 | 1.01  | 0.38 | 3.72 | 1.09 | 0.28 | 0.94 | 0.31 | 0.06 | 0.23       | 0.1           | 0.24  | 0.04  | 0.314  | 0.133 | 0.023 | 0.066 | 0.23  | 0.162 | 0.27  | 0.049    | 0.292    | 0.06  | AD525110                                     | serine/threonine protein kinase-like protein                           | AY053080 |          |                   |                                 |                                 |
| <b>Protein phosphatase</b>                     |                                      |      |      |      |      |      |      |       |       |      |      |      |      |      |  |      |       |      |      |      |      |      |      |      |            |               |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |
| RAF105-14-M09                                  | 1.15                                 | 0.87 | 1.51 | 0.08 | 1.91 | 0    | 2.77 | 0.94  | 4.63  | 2.26 | 2.07 | 0.13 | 1.67 | 0.37 | 1.45   | 0.09 | 0.37  | 0.66 | 1.59 | 0.1  | 0.39 | 0.06 | 0.17 | 0.18 | 0.08       | 0.17          | 0.03  | 0.261 | 0.165  | 0.073 | 0.044 | 0.581 | 0.204 | 0.508 | 0.01  | 0.605    | 0.11     | AD316800  | protein phosphatase, putative                |  | AV823057 | AV783955 |                   |                                 |                                 |
| <b>Signaling</b>                               |                                      |      |      |      |      |      |      |       |       |      |      |      |      |      |  |      |       |      |      |      |      |      |      |      |            |               |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |
| RAF104-13-K15                                  | 0.66                                 | 0.16 | 0.83 | 0.18 | 0.72 | 0.01 | 1.24 | 0.31  | 3.15  | 2.47 | 2.62 | 0.67 | 1.52 | 1.59 | 0.39   | 0.46 | 0.25  | 1.46 | 0.07 | 0.68 | 0.14 | 0.69 | 0.01 | 0.37 | 0.02       | 0.26          | 0.02  | 0.266 | 0.056  | 0.066 | 0.083 | 0.546 | 0.192 | 0.409 | 0.042 | 0.51     | 0.14     | At1g36390   | GTP-binding protein, putative                | AF370263   | AV821567 |          |                   |                                 |                                 |
| RAF104-09-J20                                  | 1.01                                 | 0.92 | 2.85 | 0.76 | 3.13 | 0.64 | 1.98 | 0.52  | 3.66  | 0.74 | 2.37 | 0.48 | 1.56 | 0.23 | 1.68   | 0.43 | 0.52  | 2.55 | 1.93 | 0.91 | 0.43 | 0.08 | 0.31 | 0.09 | 0.29       | 0.18          | 0.29  | 0     | 0.304  | 0.073 | 0.056 | 0.003 | 0.311 | 0.14  | 0.359 | 0.038    | 0.385    | 0   | AD359480                                     | NaCl-inducible Ca <sup>2+</sup> -binding protein-like; calmodulin-like | AF378694 | AV821391 | AV781824          |                                 |                                 |
| <b>Transcription factor</b>                    |                                      |      |      |      |      |      |      |       |       |      |      |      |      |      |  |      |       |      |      |      |      |      |      |      |            |               |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |
| RAF105-20-N17                                  | 1.48                                 | 1.65 | 2.07 | 0.62 | 2.15 | 1.37 | 0.38 | 3.1   | 0.34  | 2.34 | 1.31 | 1.66 | 2.04 | 1.8  | 0.89   | 0.59 | 0.49  | 1.65 | 0.86 | 0.46 | 0.1  | 0.37 | 0.02 | 0.31 | 0.1        | 0.29          | 0.01  | 0.463 | 0.059  | 0.023 | 0.082 | 0.358 | 0.134 | 0.397 | 0.111 | 0.635    | 0.07     | AD3246830   | CCA1   | AY050961   | AV823536 | AV784525 |                   |                                 |                                 |
| RAF104-17-F21                                  | 2.28                                 | 4.17 | 7.31 | 3.55 | 4.14 | 1.49 | 1.81 | 3.36  | 4.57  | 0.61 | 3.02 | 1.23 | 1.85 | 0.58 | 2.46   | 2.1  | 0.9   | 0.85 | 2.06 | 0.98 | 0.32 | 0.57 | 0.07 | 0.34 | 0.18       | 0.27          | 0.16  | 0.422 | 0.07   | 0.034 | 0.042 | 0.375 | 0.105 | 0.293 | 0.049 | 0.636    | 0.16     | At1g01060   | DNA-binding protein, putative                | AY050961   | AV821864 | AV782430 |                   |                                 |                                 |
| DREB1A   | 2.07                                 | 2.27 | 9.63 | 3.57 | 5.61 | 3.21 | 2.42 | 3.35  | 3.17  | 0.98 | 0.94 | 0.66 | 0.45 | 1.04 | 0.14   | 0.04 | 0.13  | 1.34 | 0.42 | 0.1  | 0.39 | 0.07 | 0.32 | 0.11 | 0.37       | 0.15          | 0.269 | 0.034 | 0.038  | 0.113 | 0.476 | 0.57  | 0.115 | 0.086 | 0.12  | AD324581 | DREB1A   | AB007787  | AV782309                                     |  |          |          |                   |                                 |                                 |
| RAF105-05-A21                                  | 0.52                                 | 0.21 | 0.84 | 0.13 | 1.11 | 0.22 | 2.07 | 0.42  | 4.94  | 2.37 | 0.71 | 1.63 | 0.01 | 1.53 | 0.72   | 0.43 | 0.47  | 1.36 | 0.06 | 0.56 | 0.24 | 0.65 | 0.28 | 0.16 | 0.03       | 0.23          | 0.04  | 0.211 | 0.008  | 0.038 | 0.113 | 0.476 | 0.313 | 0.056 | 0.448 | 0.05     | AD325660 | MADS-box protein (AGL20)                          | AF385731                                     | AV822335   | AV783069 |          |                   |                                 |                                 |
| RAF109-12-G02                                  | 0.52                                 | 0.1  | 0.77 | 0.12 | 2.63 | 0.93 | 5.82 | 3.12  | 3.23  | 1.36 | 1.02 | 0.34 | 0.31 | 1.27 | 0.01   | 0.31 | 0.19  | 0.27 | 0.02 | 0.37 | 0.08 | 0.01 | 0.01 | 0.01 | 0.01       | 0.02          | 0.02  | 0.357 | 0.008  | 0.081 | 0.009 | 0.418 | 0.019 | 0.625 | 0.069 | 0.451    | 0.01     | AD561380  | pseudo-response regulator 1                  | AV827201   | AV782504 |          |                   |                                 |                                 |
| RAF105-03-H05                                  | 1.05                                 | 0.73 | 2.28 | 0.66 | 1.58 | 0.17 | 1.21 | 0.12  | 2.52  | 0.77 | 1.37 | 0.22 | 1.16 | 0.12 | 1.02   | 0.52 | 0.02  | 1.05 | 1.05 | 0.25 | 0.31 | 0.26 | 0.05 | 0.29 | 0.08       | 0.36          | 0.12  | 0.276 | 0.009  | 0.143 | 0.115 | 0.72  | 0.003 | 0.553 | 0.104 | 0.626    | 0.01     | AD327310  | unknown protein                              | AY070721   | AV82227  | AV782927 |                   |                                 |                                 |
| RAF104-08-Q07                                  | 1.72                                 | 2.08 | 4.19 | 1.74 | 3.12 | 1.27 | 1.41 | 0.01  | 4.5   | 4.95 | 2.51 | 2.74 | 2.04 | 0.01 | 2.48   | 1.47 | 0.91  | 5.99 | 2.24 | 0.83 | 0.31 | 0.08 | 0.28 | 0.13 | 0.26       | 0.15          | 0.29  | 0.01  | 0.937  | 0.034 | 0.112 | 0.05  | 0.419 | 0.245 | 0.385 | 0.045    | 0.519    | 0.21  | AT5G7300                                     | unknown protein  | AF378692 | AV821778 |                   |                                 |                                 |
| RAF104-15-E14                                  | 0.43                                 | 0.1  | 0.46 | 0.09 | 0.58 | 0.15 | 1.63 | 0.47  | 1.95  | 0.3  | 2.06 | 0.04 | 1.23 | 0.63 | 1.42   | 0.3  | 0.35  | 2.01 | 1.04 | 0.24 | 0.61 | 0.25 | 0.02 | 0.34 | 0.03       | 0.37          | 0.16  | 0.285 | 0.107  | 0.157 | 0.003 | 0.371 | 0.076 | 0.478 | 0.018 | 0.537    | 0.08     | At1g02685   | unknown protein                              | AF370248   | AV821687 | AV782214 |                   |                                 |                                 |
| RAF105-16-M20                                  | 1.2                                  | 1.84 | 3.43 | 0.68 | 3.3  | 1.96 | 2.44 | 1.31  | 3.51  | 0.67 | 3.87 | 1.04 | 2.3  | 0.2  | 0.61   | 1.09 | 0.96  | 4.22 | 2.56 | 0.74 | 0.24 | 0.02 | 0.21 | 0.11 | 0.2        | 0.09          | 0.19  | 0.04  | 0.206  | 0.073 | 0.067 | 0.02  | 0.207 | 0.186 | 0.218 | 0.038    | 0.289    | 0.07  | AD321380                                     | B-box zinc finger protein (S1H)  | B1007048 | AV823406 | AV784474          |                                 |                                 |
| RAF105-07-H00                                  | 1.2                                  | 1.53 | 3.34 | 0.34 | 5.3  | 0.21 | 2.3  | 0.69  | 3.03  | 0.69 | 3.48 | 0.91 | 2.34 | 1.13 | 2.67   | 1.59 | 0.98  | 5.99 | 2.23 | 0.7  | 0.32 | 0.03 | 0.27 | 0.09 | 0.14       | 0.25          | 0.06  | 0.298 | 0.013  | 0.09  | 0.068 | 0.264 | 0.067 | 0.468 | 0.01  | 0.453    | 0.02     | AD321380  | B-box zinc finger protein (S1H)              | AF370311   | AV823444 | AV783213 |                   |                                 |                                 |
| RAF109-13-C19                                  | 0.79                                 | 0.3  | 1.04 | 0.19 | 0.97 | 0.19 | 1.58 | 0.06  | 2.87  | 0.13 | 1.35 | 0.24 | 1.04 | 0.17 | 0.89   | 0.02 | 0.106 | 1.13 | 0.25 | 0.46 | 0.03 | 0.41 | 0.08 | 0.39 | 0.2        | 0.3           | 0.08  | 0.433 | 0.088  | 0.046 | 0.444 | 0.113 | 0.48  | 0.138 | 0.524 | 0.02     | AD318390 | teosinone branched1 like protein                  | AF367232                                     | AV827293   | AV782504 |          |                   |                                 |                                 |
| RAF109-13-B06                                  | 0.73                                 | 0.3  | 1.14 | 0.31 | 1.55 | 0.18 | 2.52 | 0.22  | 3.22  | 0.44 | 2.34 | 1.16 | 1.46 | 0.07 | 1.21   | 0.29 | 0.19  | 2.24 | 1.5  | 0.13 | 0.42 | 0.04 | 0.13 | 0.06 | 0.36       | 0.25          | 0.29  | 0.03  | 0.343  | 0.103 | 0.116 | 0.011 | 0.434 | 0.102 | 0.44  | 0.161    | 0.499    | 0.06  | AD318390                                     | teosinone branched1 like protein                                       | AF367270 | AV827293 | AV782504          |                                 |                                 |
| RAF105-19-Q24                                  | 1.38                                 | 1.97 | 2.33 | 0.5  | 2.75 | 1.18 | 1.48 | 0.6   | 4.27  | 1.79 | 3.86 | 2.98 | 1.29 | 3.27 | 1.99   | 1.18 | 0.57  | 3.11 | 1.53 | 0.98 | 0.13 | 0.48 | 0.28 | 0.37 | 0.03       | 0.36          | 0.12  | 0.389 | 0.044  | 0.053 | 0.038 | 0.33  | 0.035 | 0.351 | 0.013 | 0.309    | 0.01     | AD318390  | CONSTANS-like 1                              | AY074389   | AV823663 | AV783430 |                   |                                 |                                 |
| RAF109-18-I09                                  | 1.28                                 | 1.64 | 2.39 | 0.49 | 2.28 | 0.64 | 1.62 | 0.7   | 3.73  | 1.23 | 2.54 | 2.67 | 1.02 | 2.85 | 0.58   | 1.05 | 0.27  | 1.85 | 0.52 | 0.19 | 0.52 | 0.06 | 0.45 | 0.15 | 0.27       | 0.03          | 0.352 | 0.002 | 0.03   | 0.093 | 0.305 | 0.01  | 0.376 | 0.027 | 0.421 | 0.02     | AD318390 | CONSTANS-like 1                                   | AY056501                                     | AV825996   | AV782504 |          |                   |                                 |                                 |
| <b>Functional proteins</b>                     |                                      |      |      |      |      |      |      |       |       |      |      |      |      |      |  |      |       |      |      |      |      |      |      |      |            |               |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |
| <b>Auxin regulated protein</b>                 |                                      |      |      |      |      |      |      |       |       |      |      |      |      |      |  |      |       |      |      |      |      |      |      |      |            |               |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |
| RAF105-02-B06                                  | 0.31                                 | 0.22 | 0.43 | 0.25 | 0.86 | 0.51 | 1.73 | 0.86  | 3.43  | 0.96 | 3.84 | 0.53 | 2.47 | 0.49 | 3  | 1.61 | 1.1   | 0.74 | 2.76 | 1.23 | 0.56 | 0.18 | 0.44 | 0.01 | 0.51       | 0.19          | 0.79  | 0.23  | 0.519  | 0.195 | 0.031 | 0.01  | 0.548 | 0.01  | 0.686 | 0.16     | 0.746    | 0   | AD323380                                     | putative auxin-regulated protein                                       | AF361846 | AV821102 | AV781354          |                                 |                                 |
| RAF106-07-O19                                  | 0.67                                 | 0.35 | 1.14 | 0.1  | 1.64 | 0.14 | 1.36 | 0.21  | 1.64  | 0.37 | 1.99 | 0.21 | 0.49 | 2.1  | 0.18   | 0.54 | 0.29  | 2.58 | 2.51 | 0.45 | 0.11 | 0.77 | 0.26 | 0.55 | 0.02       | 0.63          | 0.12  | 0.475 | 0.111  | 0.081 | 0.084 | 0.262 | 0.052 | 0.439 | 0.081 | 0.331    | 0.06     | AD303400  | putative GH3-like protein                    | AY059941   | AV823719 | AV781848 |                   |                                 |                                 |
| <b>Carbohydrate metabolism-related protein</b> |                                      |      |      |      |      |      |      |       |       |      |      |      |      |      |  |      |       |      |      |      |      |      |      |      |            |               |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |
| RAF105-12-F16                                  | 0.4                                  | 0.15 | 0.39 | 0.11 | 0.26 | 0.12 | 0.33 | 0.01  | 0.37  | 0.00 | 0.44 | 0.01 | 0.59 | 0.35 | 0.38   | 0.17 | -0.97 | 0.45 | 0.28 | 0.04 | 0.54 | 0.3  | 0.69 | 0.23 | 0.64       | 0             | 0.45  | 0.09  | 0.441  | 0.128 | 0.184 | 0.147 | 0.406 | 0.16  | 0.348 | 0.082    | 0.316    | 0.05  | AD326530                                     | fructose-bisphosphate aldolase - like protein                          | AY054598 | 4.12.13  | AV783703          |                                 |                                 |
| RAF104-16-L06                                  | 0.85                                 | 0.53 | 1.33 | 0    |      |      |      |       |       |      |      |      |      |      |  |      |       |      |      |      |      |      |      |      |            |               |       |       |  |       |       |       |       |       |       |          |          |   |  |  |          |          |                   |                                 |                                 |



Supplemental Table 4-2-4. Genes down-regulated specifically in the rehydration identified by the 7k microarray analysis)

| Fun Gene                             | Ratio(Dehydration/Unstressed)2 |      |      |       |      |      |       |      |      |      |      |      | Ratio(Rehydration after dehydration/ 2hr dehydration)3 |      |      |      |      |      |      |      |           |                                   |   |          | Ratio(Rehydration after dehydration/ 2hr dehydration)3 |             | Accession Genbank | EC | Accession No. (5) <sup>1</sup> | Accession No. (3) <sup>1</sup> |
|--------------------------------------|--------------------------------|------|------|-------|------|------|-------|------|------|------|------|------|--|------|------|------|------|------|------|------|-----------|-----------------------------------|---|----------|--|-------------|-------------------|----|--------------------------------|--------------------------------|
|                                      | 1hr                            |      | 2hr  |       | 3hr  |      | 4hr   |      | 5hr  |      | 6hr  |      | 1hr  |      | 2hr  |      | 3hr  |      | 4hr  |      | 5hr       |                                   | 6hr   |          | AGI code(s)  | Annotations |                   |    |                                |                                |
|                                      | Av.                            | Std. | Av.  | Std.  | Av.  | Std. | Av.   | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.       | Std.                              |   |          |  |             |                   |    |                                |                                |
| <b>Regulatory proteins</b>           |                                |      |      |       |      |      |       |      |      |      |      |      |  |      |      |      |      |      |      |      |           |                                   |   |          |  |             |                   |    |                                |                                |
| <b>Nucleic Acids-related protein</b> |                                |      |      |       |      |      |       |      |      |      |      |      |  |      |      |      |      |      |      |      |           |                                   |   |          |  |             |                   |    |                                |                                |
| RAF05-20-P13                         | 0.51                           | 0.03 | 0.41 | 0.04  | 0.67 | 0.08 | 0.53  | 0.56 | 0.06 | 0.3  | 0.01 | 1.08 | 0.05   | 1.41 | 0.26 | 2.65 | 1.27 | 0.39 | 0.18 | 1.16 | 0.14      | A12g18050                         | histone H1  | AY045797 | AV823543   | AV784537    |                   |    |                                |                                |
| <b>Protein kinase</b>                |                                |      |      |       |      |      |       |      |      |      |      |      |  |      |      |      |      |      |      |      |           |                                   |   |          |  |             |                   |    |                                |                                |
| RAF07-14-H20                         | 3.98                           | 0.9  | 3.01 | 1.36  | 4.43 | 2.09 | 6.68  | 0.76 | 0.34 | 0.77 | 0.11 | 0.31 | 0.02   | 0.72 | 0.29 | 0.61 | 0.15 | 3.59 | 1.57 | 0.35 | 0.13      | A15g63370                         | protein kinase  | AY062461 |  | AV792325    |                   |    |                                |                                |
| RAF06-07-B08                         | 7.55                           | 3.25 | 7.49 | 3.56  | 10.7 | 5.72 | 13.61 | 1.11 | 0.1  | 0.47 | 0.04 | 0.3  | 0.05   | 0.37 | 0.01 | 0.29 | 0.03 | 0.64 | 0.11 | 0.19 | 0.13      | A12g20150                         | putative protein kinase   | AY056249 | AV823648   | AV784653    |                   |    |                                |                                |
| RAF05-19-107                         | 4.32                           | 0.74 | 2.09 | 0.4   | 2.11 | 0.99 | 2.31  | 1.24 | 0.22 | 0.4  | 0.06 | 0.46 | 0.25   | 0.27 | 0.06 | 0.4  | 0.15 | 0.88 | 0.1  | 0.46 | 0.13      | A12g47060                         | putative protein kinase   | AY080876 |  | AV784445    |                   |    |                                |                                |
| RAF11-12-J10                         | 1.78                           | 0.71 | 1.78 | 0.77  | 2.85 | 1.91 | 7.15  | 1.25 | 0.21 | 0.82 | 0.11 | 0.5  | 0.08   | 0.33 | 0.17 | 0.82 | 0.37 | 1.24 | 0.48 | 0.22 | 0.03      | A12g32800                         | putative protein kinase   | AY056257 | AV832354   | AV820841    |                   |    |                                |                                |
| RAF07-13-F17                         | 4.38                           | 0.95 | 2.65 | 0.27  | 1.68 | 0.7  | 2.23  | 1.04 | 0.16 | 0.93 | 0.12 | 0.48 | 0.08   | 0.33 | 0.06 | 0.47 | 0.08 | 2.46 | 0.32 | 0.6  | 0.04      | A12g13790                         | putative receptor protein kinase (F13J11.14/A12g13790)          | AY056257 |  | AV792087    |                   |    |                                |                                |
| RAF06-16-D18                         | 1.29                           | 0.37 | 1.73 | 0.41  | 3.97 | 0.19 | 5.08  | 1.3  | 0.18 | 0.96 | 0.03 | 0.37 | 0.17   | 0.25 | 0.02 | 0.56 | 0.14 | 1.1  | 0.07 | 0.25 | 0.15      | A14g23050                         | putative serine/threonine kinase                                | AY056241 | AV826486   | AV795151    |                   |    |                                |                                |
| RAF08-12-E12                         | 1.15                           | 0.09 | 1.62 | 0.14  | 3.61 | 0.6  | 5.47  | 1.38 | 0.27 | 0.8  | 0.08 | 0.55 | 0.16   | 0.39 | 0.19 | 0.64 | 0.14 | 0.54 | 0.11 | 0.23 | 0.21      | A15g24080                         | receptor-like protein kinase                                    | AY056241 | AV826294   | AV794295    |                   |    |                                |                                |
| <b>Protein phosphatase</b>           |                                |      |      |       |      |      |       |      |      |      |      |      |  |      |      |      |      |      |      |      |           |                                   |   |          |  |             |                   |    |                                |                                |
| RAF05-15-E19                         | 2.6                            | 0.5  | 1.01 | 2.89  | 7.94 | 3.15 | 12.8  | 0.95 | 0.1  | 0.3  | 0.02 | 1.15 | 0.06   | 0.08 | 0.01 | 0.2  | 0.08 | 0.48 | 0.11 | 0.08 | 0.01      | A13g05640                         | putative protein phosphatase-2C                                 | AY050388 | AV823099   |             |                   |    |                                |                                |
| RAF06-07-B19                         | 3.87                           | 1.12 | 2.99 | 0.99  | 4.4  | 0.5  | 6.08  | 0.64 | 0.05 | 0.3  | 0.09 | 0.18 | 0.04   | 0.14 | 0.04 | 0.28 | 0.04 | 0.69 | 0.2  | 0.13 | 0.01      | A13g11410                         | protein phosphatase 2C (PP2C)                                   | AY074368 | 3.1.3.16   | AV823651    | AV784656          |    |                                |                                |
| <b>Signaling</b>                     |                                |      |      |       |      |      |       |      |      |      |      |      |  |      |      |      |      |      |      |      |           |                                   |   |          |  |             |                   |    |                                |                                |
| RAF09-12-B15                         | 2.82                           | 0.34 | 2.05 | 0.42  | 1.84 | 0.69 | 2.04  | 1.25 | 0.4  | 1.12 | 0.12 | 0.43 | 0.09   | 0.32 | 0.04 | 0.57 | 0.06 | 1.61 | 0.3  | 0.38 | 0.1       | A14g30600                         | signal recognition particle receptor-like protein               | AY065066 |  | AV797432    |                   |    |                                |                                |
| RAF06-11-H17                         | 13.8                           | 5.96 | 4.24 | 0.85  | 4.58 | 0.85 | 8.76  | 3.23 | 0.2  | 1.01 | 0.13 | 0.43 | 0.05   | 0.53 | 0.21 | 0.33 | 0.14 | 2.07 | 0.61 | 0.21 | 0.02      | A11g76650                         | calcium-binding EF-hand family protein                          | BT002421 |  |             |                   |    |                                |                                |
| RAF08-15-N01                         | 1.35                           | 0.13 | 2.3  | 0.33  | 3.33 | 0.36 | 5.04  | 0.84 | 0.12 | 0.41 | 0.04 | 0.29 | 0.03   | 0.23 | 0.03 | 0.1  | 0.01 | 0.64 | 0.1  | 0.19 | 0.09      | A14g38810                         | EF-Hand containing protein -like                                | AY056249 | AV826469   | AV795058    |                   |    |                                |                                |
| RAF05-12-H09                         | 2.27                           | 0.25 | 2.33 | 0.75  | 2.35 | 0.57 | 4.5   | 0.91 | 0.06 | 0.52 | 0.06 | 0.33 | 0.12   | 0.48 | 0.13 | 0.37 | 0.3  | 0.74 | 0.07 | 0.27 | 0.09      | A15g65280                         | G protein-coupled receptor-like protein                         | AY054650 | AV822857   | AV783718    |                   |    |                                |                                |
| RD20                                 | 7.76                           | 3.23 | 16.9 | 14.7  | 31.8 | 21.3 | 21.2  | 1.34 | 0.2  | 0.47 | 0.04 | 0.14 | 0.04   | 0.17 | 0.05 | 0.12 | 0.04 | 0.85 | 0.22 | 0.04 | 0.02      | A12g33380                         | putative calcium-binding EF-hand protein                        | AB039924 |  |             |                   |    |                                |                                |
| RAF08-16-M12                         | 12.1                           | 3.78 | 29.1 | 15.3  | 68.4 | 20.3 | 123   | 1.66 | 0.35 | 0.56 | 0.03 | 0.1  | 0.01   | 0.16 | 0.04 | 0.09 | 0.02 | 1.24 | 0.31 | 0.03 | 0.02      | A12g33380                         | putative calcium-binding EF-hand protein                        | AY062661 |  | AV795269    |                   |    |                                |                                |
| <b>Transcription factor</b>          |                                |      |      |       |      |      |       |      |      |      |      |      |  |      |      |      |      |      |      |      |           |                                   |   |          |  |             |                   |    |                                |                                |
| RAF06-11-K21                         | 4.85                           | 1.04 | 5.98 | 4.32  | 7.81 | 4.8  | 12.2  | 0.32 | 0.02 | 0.09 | 0.02 | 0.04 | 0.01   | 0.05 | 0.02 | 0.13 | 0.08 | 0.44 | 0.04 | 0.11 | 0.23      | A12g20880                         | AP2 domain transcription factor                                 | AY062843 | AV823996   | AV785103    |                   |    |                                |                                |
| RAF04-17-A14                         | 0.98                           | 0.14 | 2.04 | 0.25  | 2.39 | 0.64 | 2.25  | 0.85 | 0.06 | 0.76 | 0.06 | 0.3  | 0.12   | 0.25 | 0.04 | 0.22 | 0.08 | 0.55 | 0.02 | 0.23 | 0.02      | A12g21050                         | AUX1-like amino acid permease                                   | AY054684 | AV821832   | AV782366    |                   |    |                                |                                |
| RAF08-12-G11                         | 0.86                           | 0.03 | 1.05 | 0.05  | 1.8  | 0.34 | 2.5   | 1.33 | 0.32 | 2.22 | 0.3  | 1.41 | 0.15   | 0.7  | 0.03 | 0.9  | 0.29 | 0.62 | 0.07 | 0.32 | 0.04      | A13g62420                         | bZIP transcription factor AtbZIP53                              | AY050923 | AV826304   | AV794325    |                   |    |                                |                                |
| RAF06-12-M01                         | 1.56                           | 0.36 | 3.87 | 1.18  | 6.25 | 2.02 | 11.5  | 1.39 | 0.25 | 0.65 | 0.07 | 0.58 | 0.17   | 0.68 | 0.02 | 0.52 | 0.07 | 1.41 | 0.6  | 0.22 | 0.02      | A14g18170                         | DNA binding like protein  | AY070761 | AV824045   | AV785180    |                   |    |                                |                                |
| RAF05-09-G15                         | 1.48                           | 0.64 | 2.19 | 0.99  | 3.09 | 0.84 | 3.22  | 0.77 | 0.14 | 0.27 | 0.04 | 0.32 | 0.3  | 0.23 | 0.03 | 0.5  | 0.42 | 0.48 | 0.14 | 0.26 | 0.05      | A13g64270                         | G-box binding bZIP transcription factor GBF3 / AtbZIP5 AF370307 | AY059828 | AV822612   | AV783418    |                   |    |                                |                                |
| RAF11-01-J18                         | 3.04                           | 0.49 | 8.82 | 1.59  | 14.5 | 5.36 | 26.6  | 0.71 | 0.13 | 0.18 | 0.05 | 0.25 | 0.05   | 0.34 | 0.07 | 0.44 | 0.03 | 0.66 | 0.08 | 0.19 | 0.04      | A13g61890                         | homeobox-leucine zipper protein ATHB-12                         | AY059828 | AV832050   | AV818968    |                   |    |                                |                                |
| RAF08-10-K11                         | 1.69                           | 0.39 | 1.68 | 0.42  | 1.82 | 0.13 | 3.33  | 0.99 | 0.03 | 0.48 | 0.05 | 0.3  | 0.08   | 0.39 | 0.2  | 0.4  | 0.03 | 0.91 | 0.36 | 0.26 | 0.01      | A14g35550                         | homeodomain - like protein                                      | AY048268 | AV826177   | AV793886    |                   |    |                                |                                |
| RAF05-20-M16                         | 2.01                           | 0.56 | 1.41 | 0.83  | 2.48 | 0.85 | 3.4   | 0.86 | 0.19 | 0.34 | 0.09 | 0.36 | 0.07   | 0.31 | 0.12 | 0.47 | 0.13 | 0.71 | 0.16 | 0.23 | 0.08      | A12g46680                         | homeodomain transcription factor (ATHB-7)                       | AY045826 | AV823530   |             |                   |    |                                |                                |
| RAF08-08-C02                         | 2.6                            | 0.95 | 5.2  | 0.95  | 14.1 | 0.61 | 33.9  | 1.73 | 0.05 | 1.44 | 0.2  | 0.5  | 0.13   | 0.64 | 0.19 | 0.25 | 0.09 | 2.36 | 0.66 | 0.26 | 0.11      | A15g24760                         | I-box binding protein-like protein                              | AY050976 | AV825479   | AV795126    |                   |    |                                |                                |
| RAF04-18-D21                         | 0.81                           | 0.2  | 0.67 | 0.12  | 0.5  | 0.19 | 0.52  | 0.64 | 0.16 | 0.3  | 0.02 | 0.59 | 0.12   | 0.86 | 0.22 | 0.79 | 0.36 | 0.51 | 0.15 | 0.9  | 0.1       | A13g57230                         | MADS-box transcription factor (AGL16)                           | AF386932 | AV821927   | AV782513    |                   |    |                                |                                |
| RAF05-14-D24                         | 2.94                           | 1.59 | 6.16 | 3.91  | 9.26 | 4.22 | 17.3  | 1.02 | 0.25 | 0.27 | 0.02 | 0.17 | 0.08   | 0.34 | 0.22 | 0.22 | 0.15 | 0.51 | 0.08 | 0.11 | 0.08      | A14g05100                         | MYB - like protein  | AF386932 | AV823002   | AV783889    |                   |    |                                |                                |
| RAF09-07-E08                         | 1.54                           | 0.2  | 1.22 | 1.16  | 2.35 | 2.53 | 4.01  | 0.93 | 0.08 | 0.44 | 0.04 | 0.31 | 0.07   | 0.28 | 0.09 | 0.58 | 0.16 | 0.86 | 0.13 | 0.12 | 0.02      | A14g21440                         | myb-related protein M4  | AY062619 | AV826797   | AV796274    |                   |    |                                |                                |
| RAF05-05-M05                         | 1.95                           | 0.37 | 1.77 | 0.54  | 1.31 | 0.18 | 1.3   | 0.49 | 0.07 | 0.45 | 0.02 | 0.46 | 0.01   | 0.32 | 0.05 | 0.44 | 0.05 | 0.62 | 0.11 | 0.61 | 0.07      | A11g78080                         | putative AP2 domain containing protein (At1g78080)              | AF370152 | AV822375   | AV783122    |                   |    |                                |                                |
| RAF09-12-N16                         | 5.61                           | 0.74 | 3.94 | 1.63  | 4.41 | 1.12 | 4.42  | 1.08 | 0.19 | 0.37 | 0.06 | 0.23 | 0.04   | 0.45 | 0.02 | 0.36 | 0.09 | 1.74 | 0.67 | 0.23 | 0.01      | A12g46510                         | putative bHLH transcription factor (bHLH017)                    | AY094399 | AV797626   |             |                   |    |                                |                                |
| RAF09-18-G10                         | 1.5                            | 0.24 | 1.8  | 0.49  | 1.2  | 0.19 | 1.43  | 0.55 | 0.12 | 0.57 | 0.05 | 0.33 | 0.06   | 0.61 | 0.09 | 0.5  | 0.07 | 1.01 | 0.53 | 0.56 | 0.02      | A15g28130                         | putative bHLH transcription factor (bHLH046)                    | AY034998 | AV827696   | AV795022    |                   |    |                                |                                |
| RAF11-12-C17                         | 3.71                           | 0.49 | 3.69 | 0.95  | 6.11 | 2.09 | 10.2  | 2.2  | 0.63 | 1.04 | 0.07 | 0.62 | 0.23   | 0.06 | 0.72 | 0.23 | 0.09 | 2.2  | 0.63 | 1.04 | 0.07      | A11g31500                         | putative C/EBP family zinc finger protein                       | AY093016 | AV820768   |             |                   |    |                                |                                |
| RAF05-16-H23                         | 9.98                           | 7.36 | 10.2 | 5.83  | 21.8 | 11.6 | 55.7  | 0.62 | 0.03 | 0.09 | 0.01 | 0.05 | 0.04   | 0.04 | 0.01 | 0.08 | 0.07 | 0.66 | 0.08 | 0.04 | 0.03      | A14g28140                         | putative DNA-binding protein                                    | AY074574 | AV823194   | AV784125    |                   |    |                                |                                |
| RAF05-21-L12                         | 5.14                           | 4.98 | 3.65 | 1.39  | 6.2  | 3.84 | 14.8  | 0.36 | 0.05 | 0.2  | 0.06 | 0.09 | 0.03   | 0.05 | 0.01 | 0.26 | 0.14 | 0.17 | 0.06 | 0.08 | 0.06      | A13g22830                         | putative heat shock protein                                     | AY045974 | AV823606   | AV784610    |                   |    |                                |                                |
| RAF06-08-C01                         | 3.21                           | 0.3  | 2.25 | 0.46  | 2.07 | 0.08 | 1.57  | 0.69 | 0.22 | 0.27 | 0.07 | 0.23 | 0.09   | 0.64 | 0.12 | 0.48 | 0.06 | 0.86 | 0.32 | 0.63 | 0.29      | A11g18710                         | Putative MYB47 transcription factor                             | AY065166 | AV823735   | AV784769    |                   |    |                                |                                |
| RAF05-12-H13                         | 1.84                           | 0.48 | 6.27 | 3.93  | 16.1 | 4.89 | 16.8  | 0.91 | 0.14 | 0.26 | 0.05 | 0.26 | 0.21   | 0.14 | 0.03 | 0.35 | 0.4  | 0.86 | 0.36 | 0.05 | 0.02      | A14g01020                         | putative protein  | AY050825 | AV822858   | AV783719    |                   |    |                                |                                |
| RAF08-16-D06                         | 8.13                           | 1.52 | 2.84 | 0.99  | 3.18 | 1.04 | 3.34  | 0.94 | 0.22 | 0.59 | 0.05 | 0.46 | 0.07   | 0.31 | 0.06 | 0.5  | 0.03 | 0.79 | 0.31 | 0.48 | 0.14      | A11g22190                         | putative protein  | AY050825 | AV795144   |             |                   |    |                                |                                |
| RAF04-15-K19                         | 3.85                           | 4.15 | 9.46 | 8.34  | 10.8 | 8.37 | 11.5  | 2.49 | 0.65 | 0.99 | 0.04 | 0.7  | 0.19   | 0.79 | 0.34 | 0.3  | 0.03 | 1.21 | 0.28 | 0.18 | 0.07      | A11g27730                         | putative salt-tolerance zinc finger protein                     | AY034998 | AV821723   | AV782258    |                   |    |                                |                                |
| RAF08-08-H20                         | 2.6                            | 0.95 | 5.2  | 0.95  | 14.1 | 0.61 | 33.9  | 1.73 | 0.05 | 1.44 | 0.2  | 0.5  | 0.13   | 0.64 | 0.19 | 0.25 | 0.09 | 2.36 | 0.66 | 0.26 | 0.11      | A15g24760                         | I-box binding protein-like protein                              | AY050976 | AV825479   | AV795126    |                   |    |                                |                                |
| RAF07-11-B03                         | 6.97                           | 3.99 | 3.23 | 0.85  | 6.16 | 1.9  | 8.94  | 1.38 | 0.13 | 0.59 | 0.08 | 0.43 | 0.02   | 0.5  | 0.1  | 0.42 | 0.04 | 1.61 | 0.45 | 0.24 | 0.05      | A14g17230                         | scarecrow-like 13 (SCL13)                                       | AY091154 | AV825567   | AV791568    |                   |    |                                |                                |
| RAF05-18-H12                         | 10.2                           | 4.96 | 4.3  | 2.356 | 1.71 | 3.64 | 2.55  | 0.71 | 0.66 | 0.05 | 0.51 | 0.19 | 0.39   | 0.23 | 0.33 | 0.22 | 2.8  | 0.47 | 0.25 | 0.02 | A11g80480 | transcription factor like protein | AY091154  | AV823369 | AV784321   |             |                   |    |                                |                                |
| RAF05-05-J07                         | 3.26                           | 0.89 | 3.75 | 0.96  | 3.51 | 0.31 | 3.22  | 0.32 | 0.04 | 0.1  | 0.02 | 0.08 | 0.02   | 0.1  | 0.01 | 0.13 | 0.04 | 0.52 | 0.23 | 0.14 | 0.05      | A15g47640                         | unknown protein   | AF385744 | AV822365   | AV783108    |                   |    |                                |                                |
| RAF05-21-I22                         | 5.19                           | 0.33 | 4.75 | 1.61  | 8.96 | 3.1  | 9.18  | 0.73 | 0.04 | 0.35 | 0.01 | 0.33 | 0.04   | 0.35 |      |      |      |      |      |      |           |                                   |   |          |  |             |                   |    |                                |                                |





Supplemental Table 4-3-1&3. Genes up-regulated in the cold and dehydration treatment identified by the 7k microarray analysis)

| FunGene                     | Ratio(cold acclimation/Unstressed)2) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Ratio(cold deacclimation after 24hr cold acclimation/ 24hr cold acclimation)2) |      |      |      |      |      |      |      |      |      | Ratio(cold deacclimation after 168hr cold acclimation/ 168hr cold acclimation)2) |      |       |      |      |      |       |      |      |      | Ratio(Dehydration/Unstressed)2) |      |      |      |      |      |      |      |            |              | Ratio(Rehydration after 2hr dehydration/ 2hr dehydration)3) |      |      |      |      |      |      |           |                             |           | Ratio(Rehydration after 5hr dehydration/ 5hr dehydration)4) |                 |  |  | Accession Genbank                                 | EC       | Accession No. (5 <sup>9</sup> ) | Accession No. (3 <sup>9</sup> ) |
|-----------------------------|--------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|------|--|------|-------|------|------|------|-------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------------|--------------|---|------|------|------|------|------|------|-----------|-----------------------------|-----------|---|-----------------|--|--|---|----------|---------------------------------|---------------------------------|
|                             | 1hr                                  |      |      |      | 2hr  |      |      |      | 5hr  |      |      |      | 10hr |      |      |      | 24hr   |      |      |      | 48hr |      |      |      | 96hr |      |  |      | 144hr |      |      |      | 168hr |      |      |      | 1hr                             |      |      |      | 2hr  |      |      |      | 5hr        |              |   |      | 10hr |      |      |      | 24hr |           |                             |           | 2hr   |                 | 24hr                                   |  |   |          |                                 |                                 |
|                             | Av.                                  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.   | Std. | Av.  | Std. | Av.   | Std. | Av.  | Std. | Av.                             | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | AGI code6) | Annotation7) |   |      |      |      |      |      |      |           |                             |           |   |                 |  |  |   |          |                                 |                                 |
| <b>Regulatory proteins</b>  |                                      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |  |      |       |      |      |      |       |      |      |      |                                 |      |      |      |      |      |      |      |            |              |   |      |      |      |      |      |      |           |                             |           |   |                 |  |  |   |          |                                 |                                 |
| <b>F-box protein</b>        |                                      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |  |      |       |      |      |      |       |      |      |      |                                 |      |      |      |      |      |      |      |            |              |   |      |      |      |      |      |      |           |                             |           |   |                 |  |  |   |          |                                 |                                 |
| RAFL05-08-B11               | 0.88                                 | 0.52 | 1    | 0.23 | 0.98 | 0.11 | 1.88 | 0.23 | 5.65 | 0.8  | 2.16 | 0.94 | 0.97 | 0.05 | 1.27 | 0.01 | 1  | 0.04 | 0.61 | 0.1  | 0.37 | 0.07 | 0.28 | 0.02 | 0.27 | 0.05 | 0.27   | 0.03 | 0.86  | 0.17 | 0.72 | 0.2  | 0.83  | 0.17 | 0.82 | 0.05 | 0.87                            | 0.36 | 3.47 | 0.81 | 6.03 | 4.47 | 9.9  | 7.25 | 17.4       | 0.7          | 0.07  | 0.42 | 0.08 | 0.8  | 0.17 | 0.65 | 0.04 | 0.83      | 0.24                        | 0.37      | 0   | 0.39            | 0.04                                   | At3g61060  | unknown protein                                   | AY034967 |                                 | AV783283                        |
| <b>Protein kinase</b>       |                                      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |  |      |       |      |      |      |       |      |      |      |                                 |      |      |      |      |      |      |      |            |              |   |      |      |      |      |      |      |           |                             |           |   |                 |  |  |   |          |                                 |                                 |
| RAFL05-14-A21               | 0.92                                 | 0.17 | 1.67 | 0.95 | 6.71 | 0.93 | 0.55 | 1.56 | 12.6 | 1.08 | 2.34 | 0.67 | 1.2  | 0.47 | 0.27 | 0.23 | 0.05   | 0.24 | 0.09 | 0.31 | 0.09 | 0.22 | 0.02 | 0.74 | 0.1  | 1.18 | 0.4  | 1.76 | 1.48  | 0.24 | 1.03 | 0.35 | 4.23  | 0.73 | 3.43 | 0.92 | 2.46                            | 1.16 | 2.92 | 1.97 | 0.45 | 1.11 | 0.14 | 1.63 | 0.21       | 0.72         | 0.14  | 0.59 | 0.07 | 2.78 | 0.3  | 1.02 | 0.32 | At3g59350 | protein kinase-like protein | AY054639  | AV822987  | AV783872        |  |  |   |          |                                 |                                 |
| RAFL04-16-A16               | 0.95                                 | 0.44 | 1.36 | 0.42 | 2.21 | 0.39 | 1.42 | 0.3  | 3.74 | 0.06 | 1.56 | 0.92 | 1.13 | 0.11 | 1.58 | 0.37 | 1.46   | 0.1  | 0.69 | 0.25 | 0.36 | 0.04 | 0.34 | 0.15 | 0.34 | 0.03 | 0.37   | 0.12 | 0.67  | 0.09 | 0.84 | 0    | 0.83  | 0.06 | 0.85 | 0.08 | 0.61                            | 0.17 | 4.76 | 1.18 | 1.92 | 0.29 | 1.65 | 0.29 | 1.83       | 0.52         | 0.04  | 0.46 | 0.03 | 0.34 | 0.06 | 0.55 | 0.23 | 0.49      | 0.17                        | 0.83      | 0.28  | 0.56            | 0.09                                   | At1g01140  | SOS2-like protein kinase PKS6/CBL-inte AF386999   | AV821759 | AV782299                        |                                 |
| <b>Signaling</b>            |                                      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |  |      |       |      |      |      |       |      |      |      |                                 |      |      |      |      |      |      |      |            |              |   |      |      |      |      |      |      |           |                             |           |   |                 |  |  |   |          |                                 |                                 |
| RAFL06-11-H17               | 1.26                                 | 0.49 | 2.73 | 1.3  | 5.75 | 0.74 | 4.06 | 1.12 | 1.45 | 0.39 | 1    | 0.12 | 0.74 | 0.06 | 0.73 | 0.17 | 0.76   | 0.12 | 0.86 | 0.21 | 0.77 | 0.08 | 0.81 | 0.38 | 0.83 | 0.02 | 0.66   | 0.17 | 0.92  | 0.12 | 1.2  | 0.28 | 1.14  | 0.16 | 1.08 | 0.11 | 13.8                            | 5.96 | 4.24 | 0.85 | 4.58 | 0.85 | 8.76 | 3.23 | 0.2        | 1.01         | 0.13  | 0.43 | 0.05 | 0.53 | 0.21 | 0.33 | 0.14 | 2.07      | 0.61                        | 0.21      | 0.02  | At1g76650       | calcium-binding EF-hand family protein | BT002421   |   |          |                                 |                                 |
| RAFL04-09-J20               | 1.01                                 | 0.92 | 2.85 | 0.76 | 3.13 | 0.64 | 1.98 | 0.52 | 3.66 | 0.74 | 2.37 | 0.48 | 1.56 | 0.23 | 1.88 | 0.43 | 1.93   | 0.91 | 0.43 | 0.08 | 0.31 | 0.09 | 0.29 | 0.18 | 0.29 | 0    | 0.3  | 0.07 | 0.45  | 0.06 | 0.28 | 0    | 0.31  | 0.14 | 0.36 | 0.04 | 0.38                            | 0    | 3.74 | 1.33 | 1.62 | 0.43 | 1.88 | 0.82 | 2.62       | 1.46         | 0.29  | 0.93 | 0.19 | 0.99 | 0.27 | 0.59 | 0.04 | 0.61      | 0.15                        | 1.52      | 0.23  | 0.79            | 0.01                                   | At5g49480  | NaCl-inducible Ca2+-binding protein-like AF378884 |          | AV821391                        | AV781824                        |
| RAFL09-10-A21               | 0.64                                 | 0.18 | 0.86 | 0.13 | 2.09 | 0.51 | 2.86 | 0.24 | 4.39 | 0.95 | 4.83 | 0.02 | 3.83 | 0.47 | 3.32 | 0.57 | 3.59   | 0.15 | 0.8  | 0.4  | 1.35 | 0.12 | 0.59 | 0.11 | 0.59 | 0.19 | 0.66   | 0.17 | 0.8   | 0.22 | 0.62 | 0.18 | 0.39  | 0.05 | 0.48 | 0.01 | 0.42                            | 0.09 | 1.92 | 0.36 | 3.17 | 0.2  | 2.08 | 0.58 | 2.12       | 1.42         | 0.26  | 1.43 | 0.22 | 1.06 | 0.29 | 0.83 | 0.44 | 0.71      | 0.17                        | 0.76      | 0.26  | 0.93            | 0.47                                   | At3g15730  | phospholipase D                                   | AV826974 | AV796911                        |                                 |
| <b>Transcription factor</b> |                                      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |      |      |  |      |       |      |      |      |       |      |      |      |                                 |      |      |      |      |      |      |      |            |              |   |      |      |      |      |      |      |           |                             |           |   |                 |  |  |   |          |                                 |                                 |
| DREB2A                      | 0.92                                 | 0.25 | 1.55 | 1.01 | 3.92 | 1.79 | 3.13 | 2.2  | 5.63 | 0.96 | 2.36 | 0.8  | 1.4  | 0.12 | 1.55 | 0.21 | 1.48   | 0.24 | 0.64 | 0.03 | 0.43 | 0.14 | 0.3  | 0.29 | 0.31 | 0.23 | 0.38   | 0.25 | 1.2   | 0.2  | 0.73 | 0.06 | 0.84  | 0.63 | 0.11 | 0.76 | 0.02                            | 26.5 | 2.69 | 13   | 9.21 | 16.7 | 3.96 | 22.4 | 0.77       | 0.25         | 0.32  | 0.02 | 0.11 | 0.04 | 0.09 | 0.02 | 0.22 | 0.2       | 0.82                        | 0.33      | 0.06  | 0.01            | At5g05410                              | DREB2A (dbj)BA33794.1                                | AB007790  |          |                                 |                                 |
| RAFL11-12-C17               | 1.13                                 | 0.95 | 2.35 | 0.85 | 2.59 | 0.25 | 0.51 | 0.05 | 4.56 | 1.54 | 1.61 | 0.58 | 1.27 | 0.99 | 1.22 | 0.78 | 1.57   | 0.96 | 0.49 | 0.08 | 0.39 | 0.05 | 0.39 | 0.24 | 0.36 | 0.09 | 0.44   | 0.04 | 0.78  | 0.01 | 0.45 | 0.46 | 0.11  | 0.64 | 0.08 | 0.47 | 0                               | 3.71 | 0.48 | 3.09 | 0.95 | 6.11 | 2.09 | 10.2 | 2.2        | 0.63         | 1.04  | 0.07 | 0.55 | 0.08 | 0.23 | 0.06 | 0.76 | 0.24      | 2.18                        | 0.68      | 0.32  | 0.04            | At2g40140                              | putative CCH-type zinc finger protein                | AY093016  |          | AV820768                        |                                 |
| RAFL06-08-C01               | 1.13                                 | 0.17 | 1.98 | 0.17 | 3.45 | 1.17 | 0.15 | 1.3  | 1.1  | 0.02 | 1.46 | 0.39 | 1.52 | 0.44 | 1.27 | 0.12 | 0.99   | 0.07 | 1.04 | 0.13 | 0.95 | 0.03 | 1.12 | 0.08 | 1.47 | 0.12 | 0.95   | 0.09 | 0.88  | 0.04 | 0.87 | 1.12 | 0.82  | 0.17 | 3.21 | 0.3  | 2.25                            | 0.46 | 2.07 | 0.08 | 1.57 | 0.69 | 0.22 | 0.27 | 0.07       | 0.23         | 0.09  | 0.64 | 0.12 | 0.48 | 0.06 | 0.86 | 0.32 | 0.63      | 0.29                        | At1g18710 | Putative MYB47 transcription factor                         | AY065166        | AV823735                               | AV784769   |   |          |                                 |                                 |
| RAFL04-15-K19               | 1.49                                 | 1.76 | 5.34 | 4.66 | 5.54 | 1.75 | 2.52 | 0.85 | 2.76 | 1.25 | 0.96 | 0.17 | 0.77 | 0.4  | 0.83 | 0.47 | 0.67   | 0.46 | 0.12 | 0.43 | 0    | 0.41 | 0.23 | 0.52 | 0.09 | 0.47 | 0.06   | 0.88 | 0.09  | 0.68 | 0.06 | 0.65 | 0.07  | 0.67 | 0.09 | 0.71 | 0.04                            | 3.85 | 4.15 | 9.46 | 8.34 | 10.6 | 8.37 | 11.5 | 2.49       | 0.65         | 0.99  | 0.04 | 0.7  | 0.19 | 0.79 | 0.34 | 0.3  | 0.05      | 1.21                        | 0.28      | 0.18  | 0.07            | At1g27730                              | putative salt-tolerance zinc finger protein AY034988 | AV821723  | AV782258 |                                 |                                 |
| RAFL05-19-C11               | 0.74                                 | 0.74 | 1.65 | 0.64 | 2.81 | 0.56 | 2.57 | 0.39 | 3.71 | 0.3  | 1.62 | 0.15 | 1.37 | 0.52 | 1.7  | 0.23 | 1.76   | 0.17 | 0.28 | 0.04 | 0.19 | 0.04 | 0.2  | 0.07 | 0.2  | 0.01 | 0.26   | 0.14 | 0.35  | 0.06 | 0.28 | 0.01 | 0.3   | 0.1  | 0.32 | 0.02 | 0.33                            | 0.06 | 2.1  | 0.17 | 2.57 | 0.84 | 4.96 | 0.71 | 4.61       | 0.49         | 0.08  | 0.17 | 0.03 | 0.21 | 0.54 | 0.2  | 0.48 | 0.09      | 0.41                        | 0.31      | 0.11  | 0.22            | 0.07                                   | At4g29190  | unknown protein                                   | AY045870 | AV823507                        | AV784489                        |
| RAFL08-11-M13               | 1.78                                 | 1.17 | 4.17 | 1.01 | 4.05 | 2.62 | 1.68 | 0.5  | 2.77 | 0.74 | 0.81 | 1.33 | 0.35 | 1.24 | 0.16 | 1.27 | 0.03   | 1.22 | 0.18 | 0.78 | 0.32 | 0.55 | 0.08 | 0.49 | 0.4  | 0.63 | 0.09   | 0.58 | 0.18  | 0.89 | 0.13 | 0.84 | 0.29  | 0.64 | 0.71 | 0.85 | 0.09                            | 5.17 | 3.36 | 3.21 | 0.61 | 3.46 | 1.39 | 5.13 | 2.29       | 0.5          | 1.35  | 0.27 | 0.88 | 0.07 | 1.01 | 0.3  | 0.58 | 0.16      | 0.49                        | 0.36      | 0.39  | 0.04            | At5g59820                              | zinc finger protein Zat12                            | AY054915  | AV826254 | AV794178                        |                                 |
| RAFL05-19-G24               | 1.38                                 | 1.87 | 2.33 | 0.5  | 2.75 | 0.18 | 1.45 | 0.6  | 4.27 | 1.79 | 3.86 | 2.08 | 2.67 | 1.28 | 3.27 | 1.87 | 3.31   | 1.53 | 0.57 | 0.12 | 0.48 | 0.05 | 0.37 | 0.03 | 0.36 | 0.12 | 0.38   | 0.02 | 0.41  | 0.05 | 0.3  | 0.03 | 0.3   | 0.04 | 0.35 | 0.01 | 0.4                             | 0.01 | 1.44 | 0.5  | 1.8  | 1.59 | 3.29 | 0.7  | 0.78       | 0.46         | 0.06  | 0.48 | 0.01 | 0.62 | 0.15 | 0.87 | 0.07 | 0.75      | 0.35                        | 0.37      | 0.02  | 0.7             | 0.35                                   | At5g15850  | CONSTANS-like 1                                   | AY074369 | AV823463                        | AV784432                        |
| RAFL07-18-I09               | 1.28                                 | 1.64 | 2.39 | 0.49 | 2.28 | 0.04 | 1.62 | 0.7  | 3.73 | 1.23 | 3.72 | 2.54 | 2.67 | 0.12 | 2.85 | 0.58 | 3.77   | 1.85 | 0.52 | 0.19 | 0.52 | 0.06 | 0.45 | 0.15 | 0.27 | 0.03 | 0.36   | 0    | 0.42  | 0.03 | 0.37 | 0.09 | 0.3   | 0.01 | 0.38 | 0.07 | 0.42                            | 0.02 | 4.12 | 1.42 | 2.21 | 0.65 | 2.72 | 0.44 | 3.73       | 3.2          | 1.11  | 1.51 | 0.1  | 0.81 | 0.02 | 0.67 | 0.08 | 0.58      | 0.03                        | 2.94      | 0.94  | 0.69            | 0.22                                   | At3g55980  | Zinc finger protein CONSTANS-LIKE 1 (AY065001)    | AY065001 | AV825996                        | AV793209                        |
| RAFL08-10-O13               | 1.54                                 | 1.66 | 4.89 | 4.4  | 4.5  | 1.94 | 2.48 | 0.4  | 1.43 | 0.72 | 0.89 | 0.11 | 0.92 | 0.31 | 0.83 | 0.57 | 0.79   | 0.45 | 1.15 | 0.16 | 1.18 | 0.03 | 0.91 | 0.06 | 1.15 | 0.07 | 1.04   | 0.04 | 1.47  | 0.18 | 1.08 | 0.22 | 0.91  | 1.03 | 0    | 1.05 | 0.08                            | 6.81 | 0.89 | 2.06 | 0.34 | 2.09 | 0.38 | 3.73 | 3.42       | 0.36         | 1.4   | 0.18 | 0.6  | 0.14 | 0.27 | 0.04 | 0.51 | 0.04      | 2.89                        | 0.09      | 0.36  | 0.03            | At3g55980                              | unknown protein                                      | AY065282  |          | AV793942                        |                                 |
| RAFL08-18-O11               | 1.78                                 | 1.22 | 3.03 | 1.17 | 3.18 | 0.82 | 1.68 | 0.56 | 1.19 | 0.14 | 1.01 | 0.14 | 0.19 | 0.99 | 0.81 | 0.35 | 0.86   | 0.13 | 1.24 | 0.22 | 1.11 | 0.16 | 1.03 | 0.18 | 1.16 | 0.03 | 1.03   | 0.12 | 1.31  | 0.29 | 1.25 | 0.26 | 1.21  | 0.03 | 1.18 | 0.07 | 1.16                            | 0.17 | 4.12 | 1.42 | 2.21 | 0.65 | 2.72 | 0.44 | 3.73       | 3.2          | 1.11  | 1.51 | 0.1  | 0.81 | 0.02 | 0.67 | 0.08 | 0.58      | 0.03                        | 2.94      | 0.94  | 0.69            | 0.22                                   | At3g55980  | unknown protein                                   | AY065282 |                                 | AV795734                        |
| RD26                        | 1.25                                 | 0.69 | 1.14 | 0.17 | 1.13 | 0.25 | 1.7  | 0.45 | 3.91 | 0.67 | 1.47 | 0.08 | 1.12 | 0.06 | 1.29 | 0.39 | 1.51   | 0.81 | 0.28 | 0.48 | 0.08 | 0.41 | 0.13 | 0.37 | 0.14 | 0.35 | 0.19   | 1.36 | 0.4   | 0.84 | 0.08 | 0.65 | 0.03  | 0.92 | 0.23 | 4.08 | 1.23                            | 13.9 | 13.4 | 32.8 | 27.9 | 62.3 | 0.53 | 0.19 | 0.13       | 0.03         | 0.25  | 0.09 | 0.23 | 0.24 | 0.19 | 0.09 | 0.45 | 0.06      | 0.11                        | 0.01      | At4g27410   | unknown protein | AB039926                               |  |   |          |                                 |                                 |
| RAFL09-15-E01               | 1                                    | 0.16 | 1.06 | 0.1  | 1.67 | 0.05 | 2.54 | 0.51 | 5.15 | 3.34 | 1.7  | 0.54 | 1    | 0.22 | 1.08 | 0.1  | 1.28   | 0.01 | 1.03 | 0.23 | 0.47 | 0.15 | 0.37 | 0.33 | 0.41 | 0.11 | 0.61   | 0.12 | 1.29  | 0.4  | 0.82 | 0.18 | 0.82  | 0.01 | 0.79 | 0.11 | 0.88                            | 0.08 | 6.85 | 4    | 9.78 | 7.54 | 22.8 | 9.28 | 36.2       | 0.7          | 0.11  | 0.21 | 0.05 | 0.12 | 0.03 | 0.12 | 0.02 | 0.21      | 0.07                        | 0.57      | 0.24  | 0.06            | 0.01                                   | At4g27410  | unknown protein                                   | BT000790 | AV827419                        | AV798174                        |
| RAFL08-14-A19               | 0.92                                 | 0.08 | 1.04 | 0.28 | 1.88 | 0.27 | 1.75 | 0.5  | 3.68 | 0.54 | 0.97 | 0.02 | 0.8  | 0.01 | 0.77 | 0.05 | 0.89   | 0.12 | 0.71 | 0.17 | 0.38 | 0.07 | 0.4  | 0.1  | 0.49 | 0.17 | 0.57   | 0.42 | 1.22  | 0.28 | 0.79 | 0.12 | 0.78  | 0.06 | 1.41 | 0.49 | 1.17                            | 0.02 | 17.9 | 7.33 | 17.9 | 15.9 | 37.4 | 16.9 | 43.4       | 0.61         | 0.2   | 0.21 | 0.02 | 0.11 | 0.04 | 0.12 | 0.01 | 0.16      | 0.11                        | 0.67      | 0.18  | 0.08            | 0.01                                   | At   |   |          |                                 |                                 |





**Supplemental Table 4-3-2. Genes up-regulated specifically in the cold treatments identified by the 7k microarray analysis<sup>1)</sup>**

| Fun Gene                                       | Ratio(cold acclimation/Unstressed) <sup>2)</sup> |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      | Ratio(cold deacclimation after 24hr cold acclimation/ 24hr cold acclimation) <sup>3)</sup> |      |      |      |      |      |      |      |      |      |      |      | Ratio(cold deacclimation after 168hr cold acclimation/ 168hr cold acclimation) <sup>3)</sup> |      |      |      |      |      |           |                                |   |  |          |          | AGI code <sup>6)</sup> | Annotation <sup>7)</sup> | Accession Genbank | EC | Accession No. (5) <sup>8)</sup> | Accession No. (3) <sup>9)</sup> |
|--|--|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|-------|------|--|------|------|------|------|------|------|------|------|------|------|------|--|------|------|------|------|------|-----------|--------------------------------|---|--|----------|----------|------------------------|--------------------------|-------------------|----|---------------------------------|---------------------------------|
|  | 1hr  |      | 2hr  |      | 5hr  |      | 10hr |      | 24hr |      | 48hr |      | 96hr |      | 144hr |      | 168hr |      | 1hr  |      | 2hr  |      | 5hr  |      | 10hr |      | 24hr |      | 1hr  |      | 2hr  |      | 5hr  |      | 10hr |      | 24hr      |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
|  | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.   | Std. | Av.   | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. |           |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
| <b>Regulatory proteins</b>                     |  |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |  |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |           |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
| <b>F-box protein</b>                           |  |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |  |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |           |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
| RAFL07-18-B18                                  | 0.76   | 0.11 | 1.41 | 0.5  | 5.52 | 1.6  | 0.47 | 2.65 | 1.76 | 0.26 | 1.49 | 0.06 | 1.64 | 0.53 | 2     | 0.28 | 0.3   | 0.03 | 0.49   | 0.14 | 0.38 | 0.3  | 0.49 | 0.17 | 0.53 | 0.31 | 0.57 | 0.07 | 0.63 | 0.07 | 0.35   | 0.12 | 0.61 | 0.16 | 0.53 | 0.16 | At1g68050 | unknown protein                | AY064999  |  | AV825966 | AV793099 |                        |                          |                   |    |                                 |                                 |
| <b>Nucleic Acids-related protein</b>           |  |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |  |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |           |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
| RAFL09-18-O13                                  | 0.94   | 0.36 | 1.17 | 0.2  | 1.87 | 0.11 | 1.74 | 0.29 | 1.53 | 0.2  | 2.67 | 1    | 3.01 | 0.87 | 2.64  | 0.16 | 2.24  | 0.57 | 1.01   | 0.34 | 1.32 | 0.05 | 1.05 | 0.05 | 0.92 | 0.09 | 1.08 | 0.02 | 1.04 | 0.05 | 0.81   | 0.04 | 0.64 | 0.12 | 0.61 | 0.13 | 0.7       | 0.08                           | At1g49760   | Putative Poly-A Binding Protein (F14J22.3)   | AF370517 |          | AV827740               | AV799158                 |                   |    |                                 |                                 |
| RAFL05-16-C09                                  | 0.96   | 0.02 | 0.92 | 0.12 | 1.17 | 0.46 | 2.79 | 0.07 | 2.85 | 0.2  | 3.09 | 1    | 2.21 | 0.14 | 2.48  | 0.14 | 1.54  | 0.41 | 0.79   | 0.27 | 0.67 | 0.11 | 0.46 | 0.08 | 0.48 | 0.09 | 0.38 | 0.01 | 0.83 | 0.06 | 0.72   | 0.17 | 0.66 | 0.01 | 0.87 | 0.2  | 1.19      | 0.09                           | At3g54400   | nucleoid DNA-binding - like protein          | AY070479 |          | AV823163               | AV784086                 |                   |    |                                 |                                 |
| RAFL04-12-N15                                  | 0.69   | 0.37 | 1    | 0.18 | 1.13 | 1.1  | 2.25 | 0.98 | 7.31 | 7.6  | 2.34 | 0.23 | 1.55 | 0.28 | 2.09  | 1.75 | 0.76  | 0.33 | 0.08   | 0.24 | 0.12 | 0.18 | 0.05 | 0.16 | 0.04 | 0.19 | 0.06 | 0.5  | 0.14 | 0.31 | 0.07   | 0.33 | 0.25 | 0.23 | 0.02 | 0.41 | 0.01      | At3g55580                      | regulator of chromosome condensation-like protein             |  |          | AV821512 | AV781998               |                          |                   |    |                                 |                                 |
| <b>Protein kinase</b>                          |  |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |  |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |           |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
| RAFL09-18-H23                                  | 0.93   | 0.08 | 1    | 0.06 | 2.72 | 0.72 | 3.17 | 0.7  | 5.05 | 0.1  | 1.58 | 0.79 | 1.29 | 0.28 | 1.33  | 0.43 | 1.12  | 0.09 | 0.9  | 0.26 | 0.84 | 0.48 | 0.76 | 0.37 | 0.76 | 0.14 | 0.87 | 0.06 | 0.92 | 0.05 | 1.06   | 0.26 | 0.92 | 0.15 | 1.13 | #### | 1.06      | 0.02                           | At2g43230   | protein kinase like protein                  | AY054533 |          | AV827705               | AV799054                 |                   |    |                                 |                                 |
| RAFL11-11-C18                                  | 0.67   | 0.3  | 0.97 | 0.16 | 1.86 | 0.72 | 4.05 | 1.36 | 3.2  | 0.52 | 2.91 | 0.39 | 2.68 | 0.34 | 2.52  | 0.64 | 2.79  | 0.36 | 0.56   | 0.3  | 0.52 | 0.01 | 0.3  | 0.18 | 0.26 | 0.07 | 0.39 | 0.03 | 0.44 | 0.06 | 0.34   | 0.07 | 0.39 | 0.16 | 0.47 | 0.14 | 0.37      | 0.14                           | At5g10290   | protein serine/threonine kinase-like protein | AY093029 |          | AV832312               | AV820577                 |                   |    |                                 |                                 |
| RAFL05-16-K11                                  | 0.61   | 0.39 | 0.86 | 0.12 | 1.28 | 0.18 | 1.85 | 0.65 | 4.47 | 1.74 | 4.06 | 1.29 | 1.78 | 0.33 | 2.74  | 1.04 | 3.72  | 1.09 | 0.28   | 0.04 | 0.31 | 0.08 | 0.23 | 0.1  | 0.24 | 0.04 | 0.31 | 0.13 | 0.23 | 0.02 | 0.22   | 0.07 | 0.23 | 0.16 | 0.27 | 0.05 | 0.29      | 0.04                           | At5g25110   | serine/threonine protein kinase-like protein | AY050360 |          |                        | AV784142                 |                   |    |                                 |                                 |
| <b>Protein phosphatase</b>                     |  |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |  |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |           |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
| RAFL07-13-C02                                  | 1.32   | 0.39 | 1.36 | 0.31 | 1.95 | 0.78 | 1.94 | 0.21 | 1.48 | 2.09 | 0.08 | 1.95 | 0.32 | 2.05 | 0.48  | 3.54 | 2.45  | 1.13 | 0.09   | 1.08 | 0.13 | 0.99 | 0.01 | 0.98 | 0.17 | 1.31 | 0.09 | 1.33 | 0.43 | 4.82 | 0.88   | 0.2  | 0.51 | 0.1  | 0.6  | 0.11 | 0.07      | At1g10430                      | serine/threonine protein phosphatase, PP2A, catalytic subunit | AY059847                                     | 3.1.3.16 | AV825704 | AV792039               |                          |                   |    |                                 |                                 |
| RAFL05-14-M09                                  | 1.15   | 0.87 | 1.51 | 0.08 | 1.91 | 0    | 2.77 | 0.94 | 4.63 | 2.26 | 2.07 | 0.13 | 1.67 | 0.37 | 1.45  | 0.09 | 1.59  | 0.1  | 0.39   | 0.06 | 0.17 | 0.01 | 0.18 | 0.08 | 0.17 | 0.03 | 0.26 | 0.16 | 0.49 | 0.07 | 0.41   | 0.04 | 0.58 | 0.2  | 0.51 | 0.1  | 0.6       | 0.11                           | At3g16800   | protein phosphatase, putative                |          |          | AV823057               | AV783955                 |                   |    |                                 |                                 |
| <b>Signaling</b>                               |  |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |  |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |           |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
| RAFL04-13-K15                                  | 0.66   | 0.16 | 0.83 | 0.18 | 0.72 | 0.01 | 1.24 | 0.31 | 3.15 | 0.47 | 2.4  | 0.62 | 1.67 | 0.52 | 1.59  | 0.39 | 1.48  | 0.07 | 0.68   | 0.14 | 0.69 | 0.01 | 0.37 | 0.02 | 0.28 | 0.02 | 0.29 | 0.1  | 0.7  | 0.07 | 0.64   | 0.08 | 0.55 | 0.19 | 0.5  | 0.04 | 0.51      | 0.14                           | At1g43890   | GTP-binding protein, putative                | AF370263 |          | AV821567               |                          |                   |    |                                 |                                 |
| RAFL09-10-B14                                  | 1.05   | 0.32 | 1.88 | 0.86 | 4.41 | 0.2  | 1.21 | 0.01 | 2.06 | 1.51 | 0.59 | 1.49 | 0.27 | 1.96 | 0     | 1.64 | 0.73  | 0.09 | 0.75   | 0.12 | 0.55 | 0.42 | 0.64 | 0.07 | 0.64 | 0.31 | 0.9  | 0.1  | 0.8  | 0.04 | 0.66   | 0.01 | 0.61 | 0.05 | 0.68 | 0.04 | At5g39670 | calcium-binding protein - like | AY058192  |  | AV826977 | AV796923 |                        |                          |                   |    |                                 |                                 |
| <b>Transcription factor</b>                    |  |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |  |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |           |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
| RAFL09-18-B14                                  | 0.61   | 0.09 | 0.75 | 0.09 | 1.48 | 0.07 | 2.99 | 0.22 | 3    | 0.17 | 3.19 | 0.23 | 2.23 | 0.49 | 2.13  | 0.18 | 2.27  | 0.53 | 0.87   | 0.16 | 0.9  | 0.06 | 0.61 | 0.17 | 0.65 | 0.14 | 0.69 | 0.14 | 0.81 | 0.23 | 0.52   | 0.14 | 0.52 | 0.12 | 0.69 | 0.05 | 0.66      | 0.19                           | At1g20685   | unknown protein                              |          |          |                        | AV798939                 |                   |    |                                 |                                 |
| RAFL05-20-N17                                  | 1.48   | 1.65 | 2.07 | 0.62 | 2.1  | 0.15 | 1.37 | 0.38 | 3.1  | 0.34 | 2.34 | 1.31 | 1.66 | 0.24 | 1.8   | 0.89 | 1.65  | 0.86 | 0.46   | 0.1  | 0.37 | 0.02 | 0.31 | 0.1  | 0.29 | 0.01 | 0.46 | 0.06 | 0.62 | 0.02 | 0.37   | 0.08 | 0.36 | 0.13 | 0.4  | 0.11 | 0.64      | 0.07                           | At2g46830   | CCA1   | AY050961 |          | AV823536               | AV784525                 |                   |    |                                 |                                 |
| RAFL04-17-F21                                  | 2.28   | 4.17 | 7.31 | 3.55 | 4.4  | 1.49 | 1.81 | 0.36 | 4.57 | 0.61 | 3.02 | 1.23 | 1.85 | 0.58 | 2.46  | 2.1  | 2.6   | 0.98 | 0.64   | 0.32 | 0.5  | 0.07 | 0.34 | 0.18 | 0.27 | 0.16 | 0.42 | 0.07 | 0.75 | 0.03 | 0.54   | 0.04 | 0.37 | 0.1  | 0.29 | 0.05 | 0.64      | 0.16                           | At1g01060   | DNA-binding protein, putative                |          |          | AV821864               | AV782430                 |                   |    |                                 |                                 |
| DREB-1A  | 2.07   | 2.27 | 9.83 | 3.57 | 5.61 | 1.31 | 2.42 | 0.35 | 3.17 | 0.37 | 2.98 | 0.04 | 0.96 | 0.45 | 1.04  | 0.14 | 1     | 0.42 | 0.1  | 0.39 | 0.07 | 0.32 | 0.11 | 0.37 | 0.15 | 0.27 | 0.03 | 0.67 | 0.08 | 0.89 | 0.23   | 0.87 | 0.56 | 0.12 | 0.69 | 0.12 | At4g25481 | DREB1A                         | AB007787  |  |          |          |                        |                          |                   |    |                                 |                                 |
| RAFL05-05-A21                                  | 0.52   | 0.21 | 0.84 | 0.13 | 1.11 | 0.22 | 2.07 | 0.42 | 4.94 | 2    | 2.37 | 0.71 | 1.63 | 0.01 | 1.53  | 0.72 | 1.36  | 0.06 | 0.56   | 0.24 | 0.65 | 0.26 | 0.18 | 0.03 | 0.23 | 0.04 | 0.21 | 0.01 | 0.74 | 0.04 | 0.57   | 0.11 | 0.48 | 0.31 | 0.06 | 0.45 | 0.05      | At2g45660                      | MADS-box protein (AGL20)                                      | AF385731                                     |          | AV822335 | AV783069               |                          |                   |    |                                 |                                 |
| RAFL09-12-G02                                  | 0.52   | 0.1  | 0.77 | 0.12 | 2.6  | 0.93 | 2.34 | 0.53 | 5.82 | 3.12 | 3.23 | 1.6  | 3.02 | 1.34 | 3.41  | 1.92 | 4.45  | 1.62 | 0.51   | 0.13 | 0.27 | 0.01 | 0.31 | 0.19 | 0.27 | 0.02 | 0.36 | 0.04 | 0.55 | 0.08 | 0.37   | #### | 0.42 | 0.02 | 0.63 | 0.07 | 0.45      | 0.01                           | At5g61380   | pseudo-response regulator 1                  | AY094393 |          | AV827201               | AV797504                 |                   |    |                                 |                                 |
| RAFL05-14-O11                                  | 0.9  | 0.04 | 1.14 | 0.28 | 2.78 | 0.24 | 1.88 | 0.12 | 4.06 | 1.64 | 1.35 | 0.56 | 1    | 0.14 | 1.19  | 0.56 | 1.12  | 0.07 | 0.58   | 0.12 | 0.44 | 0.05 | 0.45 | 0.26 | 0.42 | 0.1  | 0.5  | 0.13 | 0.94 | 0.02 | 0.94   | 0.11 | 0.74 | 0.13 | 0.82 | 0.16 | 0.83      | 0.01                           | At3g50260   | putative protein                             | AY045579 |          |                        | AV783969                 |                   |    |                                 |                                 |
| RAFL07-13-I02                                  | 1.27   | 0.08 | 1.19 | 0.18 | 0.88 | 0.96 | 0.08 | 0.99 | 0.06 | 2.02 | 0.1  | 3.19 | 0.34 | 1.99 | 2.15  | 3.27 | 0.54  | 0.97 | 0.04   | 0.9  | 0.09 | 0.91 | 0.02 | 1.03 | 0.15 | 0.98 | 0.1  | 1.11 | 0.13 | 2.91 | 1.11   | 0.02 | 1.01 | 0.06 | 1.1  | 0.02 | At1g30810 | similar to Human XE169 protein | AY062485  |  | AV825722 | AV792115 |                        |                          |                   |    |                                 |                                 |
| RAFL09-13-I06                                  | 0.73   | 0.3  | 1.14 | 0.31 | 1.55 | 0.18 | 2.52 | 0.23 | 3.22 | 0.44 | 3.24 | 0.16 | 1.45 | 0.07 | 1.21  | 0.29 | 1.5   | 0.13 | 0.42   | 0.04 | 0.43 | 0.05 | 0.38 | 0.25 | 0.29 | 0.03 | 0.34 | 0.1  | 0.62 | 0.12 | 0.45   | 0.01 | 0.43 | 0.1  | 0.44 | 0.16 | 0.5       | 0.06                           | At4g18390   | teosinte branched1 like protein              | AF367270 |          | AV827293               | AV797759                 |                   |    |                                 |                                 |
| RAFL09-11-J03                                  | 0.95   | 0.02 | 0.98 | 0.07 | 1.62 | 0.26 | 1.24 | 0.23 | 3.14 | 0.06 | 1.85 | 0.92 | 1.25 | 0.14 | 1.26  | 0.09 | 1.17  | 0.01 | 0.79   | 0.24 | 0.77 | 0.14 | 0.54 | 0.3  | 0.53 | 0.05 | 0.54 | 0.27 | 0.9  | 0.09 | 0.89   | 0.12 | 0.9  | 0.11 | 0.85 | 0.11 | 0.8       | 0.2                            | At3g13350   | unknown protein                              | AF361582 |          | AV827123               | AV797306                 |                   |    |                                 |                                 |
| RAFL11-05-P15                                  | 1.75   | 1.77 | 4.1  | 3.02 | 2.49 | 0.57 | 1.66 | 0.14 | 4.31 | 2.06 | 2.74 | 0.18 | 2.16 | 0.35 | 1.88  | 0.89 | 1.86  | 0.38 | 0.42   | 0.04 | 0.38 | 0.01 | 0.45 | 0.06 | 0.42 | 0.11 | 0.49 | 0.11 | 0.69 | 0.06 | 0.56   | 0.04 | 0.46 | 0.24 | 0.51 | 0.28 | 0.53      | 0.2                            | At5g17300   | unknown protein                              |          |          | AV832201               | AV781962                 |                   |    |                                 |                                 |
| RAFL04-09-B07                                  | 1.72   | 2.08 | 4.19 | 1.74 | 3.12 | 1.27 | 1.41 | 0.01 | 4.5  | 4.85 | 2.51 | 0.74 | 2.04 | 0.01 | 2.48  | 1.47 | 2.24  | 0.83 | 0.31   | 0.08 | 0.28 | 0.19 | 0.28 | 0.15 | 0.29 | 0.01 | 0.34 | 0.03 | 0.37 | 0.11 | 0.34   | 0.05 | 0.42 | 0.25 | 0.39 | 0.04 | 0.52      | 0.11                           | At5g17300   | unknown protein                              | AF378860 |          |                        | AV781779                 |                   |    |                                 |                                 |
| RAFL05-07-H20                                  | 1.2  | 1.53 | 3.34 | 0.34 | 5.3  | 0.21 | 2.3  | 0.69 | 3.03 | 0.09 | 3.48 | 0.91 | 2.34 | 1.13 | 2.67  | 1.59 | 2.23  | 0.7  | 0.32   | 0.03 | 0.27 | 0.09 | 0.26 | 0.14 | 0.25 | 0.06 | 0.29 | 0.01 | 0.44 | 0.09 | 0.31   | 0.06 | 0.26 | 0.07 | 0.35 | 0.01 | 0.42      | 0.02                           | At2g31380   | B-box zinc finger protein (STH)              | AF370311 |          | AV822444               | AV783213                 |                   |    |                                 |                                 |
| RAFL05-19-M20                                  | 1.2  | 1.64 | 3.43 | 0.68 | 3.3  | 1.66 | 2.44 | 1.31 | 3.51 | 0.67 | 3.87 | 1.04 | 2.8  | 0.2  | 2.61  | 1.09 | 2.56  | 0.74 | 0.24   | 0.02 | 0.21 | 0.11 | 0.2  | 0.09 | 0.19 | 0.04 | 0.21 | 0.07 | 0.31 | 0.07 | 0.23   | 0.02 | 0.21 | 0.17 | 0.22 | 0.01 | 0.29      | 0.07                           | At2g31380   | B-box zinc finger protein (STH)              | BT000798 |          | AV823496               | AV784474                 |                   |    |                                 |                                 |
| <b>Functional proteins</b>                     |  |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |  |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |           |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
| <b>Auxin-regulated protein</b>                 |  |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |  |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |           |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
| RAFL02-02-B06                                  | 0.31   | 0.22 | 0.43 | 0.25 | 0.86 | 0.51 | 1.73 | 0.86 | 3.43 | 0.96 | 3.84 | 0.53 | 2.47 | 0.49 | 3     | 1.61 | 2.76  | 1.23 | 0.56   | 0.18 | 0.44 | 0.01 | 0.51 | 0.19 | 0.79 | 0.23 | 0.52 | 0.19 | 0.47 | 0.13 | 0.28   | 0.01 | 0.55 | 0.01 | 0.69 | 0.16 | 0.75      | 0                              | At2g33830   | putative auxin-regulated protein             | AF361846 |          | AV821102               | AV781354                 |                   |    |                                 |                                 |
| <b>Carbohydrate metabolism-related protein</b> |  |      |      |      |      |      |      |      |      |      |      |      |      |      |       |      |       |      |  |      |      |      |      |      |      |      |      |      |      |      |  |      |      |      |      |      |           |                                |   |  |          |          |                        |                          |                   |    |                                 |                                 |
| RAFL07-18-C20                                  | 1.78   | 1.06 | 2.3  | 0.38 | 3.55 | 2.13 | 2.1  | 0.44 | 1.1  | 0.07 | 1.3  | 0.01 | 1.06 | 0.66 | 1.05  | 0.75 | 0.79  | #### | 0.99   | 0.4  | 1.13 | 0.2  | 0.91 | 0.05 | 0.68 | 0.04 | 0.85 | 0.09 | 1.53 | 0.13 | 1.29   | 0.01 | 1.15 | 0.93 | 0.08 | 1.02 | 0.1       | At2g21330                      |   |  |          |          |                        |                          |                   |    |                                 |                                 |

| Osmoprotectant-synthesis-related protein |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |          |          |          |          |          |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|---|---|----------|----------|----------|----------|----------|
| RAFL05-15-M09                            | 0.78 | 1.01 | 1.29 | 0.37 | 1.63 | 0.53 | 2.1  | 1.47 | 9.23 | 1.23 | 6.84 | 3.39 | 1.81 | 0.14 | 1.91 | 0.05 | 1.87 | 0.5  | 0.59 | 0.53 | 0.91 | 0.02 | 0.35 | 0.08 | 0.13 | 0.01 | 0.13 | 0    | 0.74 | 0.11 | 0.36 | 0.03 | 0.22 | 0.04 | 0.29 | 0.05 | 0.3  | 0.09      | At3g55610   | delta-1-pyrroline-5-carboxylate synthetase                    | AY091766 | 2.7.2.11 | 1.2.     | AV823133 | AV784054 |
| AtGalS3                                  | 0.67 | 0.56 | 1.02 | 0.2  | 4.03 | 0.22 | 12.7 | 0.42 | 32.8 | 6.85 | 26.4 | 12.5 | 9.3  | 2.51 | 12.2 | 0.23 | 14.9 | 7    | 0.22 | 0.06 | 0.15 | 0.01 | 0.1  | 0.12 | 0.07 | 0.03 | 0.09 | 0.1  | 0.16 | 0.03 | 0.11 | 0.05 | 0.07 | 0.04 | 0.08 | #### | 0.17 | 0.12      | At1g09350   | putative galactinol synthase                                  | AB062850 |          |          |          |          |
| RAFL04-16-K22                            | 0.38 | 0.52 | 0.96 | 0.27 | 2.79 | 0.1  | 12.2 | 4.28 | 38   | 24.6 | 36.1 | 9.35 | 18.2 | 4.69 | 18   | 1.82 | 20   | 10.1 | 0.15 | 0.18 | 0.11 | 0.04 | 0.05 | 0.05 | 0.03 | 0.02 | 0.04 | 0.01 | 0.11 | 0.02 | 0.05 | 0    | 0.04 | 0.04 | 0.04 | 0.01 | 0.07 | 0         | At1g09350   | putative galactinol synthase                                  | AF370546 |          |          | AV821807 | AV782355 |
| AtGalS1                                  | 0.83 | 0.38 | 1.03 | 0.2  | 1.63 | 0.89 | 1.85 | 1.11 | 5.4  | 2.84 | 5.11 | 1.24 | 3.15 | 0.82 | 4.18 | 3.19 | 3.03 | 0.99 | 0.82 | 0.38 | 0.64 | 0.03 | 0.36 | 0.26 | 0.27 | 0.12 | 0.39 | 0.13 | 0.61 | 0.22 | 0.51 | 0.19 | 0.31 | 0.01 | 0.35 | 0.02 | 0.4  | 0.15      | At2g47180   | putative galactinol synthase                                  | AB062848 |          |          |          |          |
| RAFL08-13-O15                            | 0.58 | 0.51 | 1.06 | 0.44 | 1.81 | 0.87 | 1.82 | 0.36 | 3.92 | 0.36 | 4.77 | 3.84 | 3.43 | 0.8  | 4.29 | 0.11 | 3.49 | 0.67 | 0.68 | 0.48 | 0.68 | 0.08 | 0.35 | 0.23 | 0.23 | 0    | 0.32 | 0.02 | 0.62 | 0.11 | 0.37 | 0.03 | 0.19 | 0.02 | 0.27 | 0.11 | 0.34 | 0.01      | At2g47180   | putative galactinol synthase                                  | AY056139 |          |          |          | AV794681 |
| Plant defense-related protein            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |          |          |          |          |          |
| RAFL08-09-G22                            | 0.89 | 0.27 | 1.35 | 0.3  | 2.24 | 0.09 | 3.14 | 0.17 | 5.58 | 0.85 | 4.08 | 0.07 | 2.94 | 0.27 | 3.4  | 0.24 | 2.81 | 0.6  | 0.92 | 0.23 | 0.91 | 0.03 | 0.43 | 0.05 | 0.45 | 0.07 | 0.33 | 0.11 | 0.94 | 0.11 | 0.94 | 0.07 | 0.77 | 0.04 | 0.67 | 0.1  | 0.52 | 0.01      | At5g06860   | polygalacturonase inhibiting protein 1; PGIP1 (gb)AAF69827.1) | AY048295 |          |          | AV826109 | AV793610 |
| RAFL05-13-A17                            | 0.8  | 0.11 | 0.83 | 0.13 | 1.83 | 0.1  | 1.97 | 1.12 | 10.7 | 3.09 | 2.28 | 1.57 | 1.14 | 0.15 | 1.35 | 0.31 | 1.14 | 0.16 | 0.43 | 0.16 | 0.2  | 0.04 | 0.18 | 0.2  | 0.21 | 0.18 | 0.2  | 0.08 | 0.68 | 0.08 | 0.65 | 0.02 | 0.61 | 0.18 | 0.64 | 0.08 | 0.79 | 0.09      | At1g32860   | putative beta-1,3-glucanase precursor                         | AY120710 |          |          | AV822910 | AV783778 |
| Protease inhibitor                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |          |          |          |          |          |
| RAFL05-08-E12                            | 0.56 | 0.35 | 1.41 | 0.21 | 3.45 | 0.35 | 4.59 | 2.16 | 7.81 | 3.77 | 6.02 | 1.01 | 4.42 | 0.9  | 4.31 | 3.3  | 4.2  | 1.52 | 0.51 | 0.19 | 0.49 | 0.01 | 0.21 | 0.01 | 0.19 | 0.05 | 0.14 | 0.03 | 0.69 | 0.08 | 0.52 | 0.08 | 0.37 | 0.04 | 0.3  | 0.03 | 0.23 | 0.03      | At2g02100   | protease inhibitor II   | AF370355 |          |          | AV822521 | AV783307 |
| Proteolytic degradation                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |          |          |          |          |          |
| RAFL08-15-D07                            | 0.88 | 0.29 | 1.14 | 0.03 | 1.5  | 0.2  | 1.43 | 0.05 | 2.35 | 0.3  | 3.55 | 0.33 | 2.58 | 0.06 | 2.94 | 0.35 | 2.84 | 0.48 | 0.91 | 0.24 | 1.12 | 0.01 | 0.78 | 0.1  | 0.77 | 0.17 | 0.74 | 0.08 | 0.94 | 0.07 | 0.82 | 0.06 | 0.61 | 0.02 | 0.67 | 0    | 0.67 | 0.07      | At4g01320   | putative CAAX prenyl protease                                 | AY056235 | 3.4.24.- |          | AV826442 | AV794917 |
| Ribosomal protein                        |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |          |          |          |          |          |
| RAFL08-09-H22                            | 0.97 | 0.09 | 1.1  | 0.16 | 2.74 | 0.32 | 1.77 | 0.46 | 3.06 | 0.01 | 1.86 | 0.07 | 1.38 | 0.25 | 1.33 | 0.06 | 1.14 | 0.08 | 0.8  | 0.11 | 0.73 | 0.13 | 0.41 | 0.15 | 0.54 | 0.36 | 0.55 | 0.34 | 0.91 | 0.19 | 0.9  | 0.07 | 0.79 | 0.03 | 0.92 | 0.06 | 1    | 0.2       | At1g71710   | RIBOSOMAL PROTEIN, putative (At1g71710)                       | AY048296 |          |          | AV826115 | AV793626 |
| Senescence-related protein               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |          |          |          |          |          |
| RAFL09-06-P19                            | 1.54 | 1.06 | 2.21 | 0.96 | 1.8  | 0.18 | 1.94 | 0.21 | 3.24 | 0.24 | 3.36 | 1.88 | 1.07 | 0.46 | 0.92 | 0.14 | 1.04 | 0.22 | 0.86 | 0.23 | 1.13 | 0.04 | 0.52 | 0.09 | 0.21 | 0.03 | 0.26 | 0.07 | 1.02 | 0.17 | 0.96 | 0.17 | 0.59 | 0.79 | 0.1  | 0.64 | 0.02 | At4g04020 | putative fibrillin                                  | AY120766  |          |          | AV826759 | AV796203 |          |
| Transport protein, ion channel, carrier  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |          |          |          |          |          |
| RAFL09-13-E01                            | 0.64 | 0.29 | 1.04 | 0.28 | 1.76 | 0.02 | 1.49 | 0.22 | 1.58 | 0.51 | 2.63 | 0.96 | 3.12 | 0.29 | 3.36 | 0.54 | 4.32 | 0.98 | 0.78 | 0.54 | 1.24 | 0.03 | 0.89 | 0.19 | 0.85 | 0.12 | 0.85 | 0.04 | 0.85 | 0.06 | 0.55 | 0.02 | 0.37 | 0.05 | 0.38 | 0.12 | 0.34 | 0.01      | At5g40780   | amino acid permease   | AF367281 |          |          | AV827269 | AV797714 |
| RAFL07-11-J04                            | 1.34 | 1.13 | 2.02 | 0.29 | 3.14 | 0.78 | 1.26 | 0.07 | 3.03 | 0.2  | 1.4  | 0.2  | 1.35 | 0.33 | 1.58 | 0.73 | 1.25 | 0.01 | 0.58 | 0.13 | 0.48 | 0.04 | 0.33 | 0.33 | 0.47 | 0.22 | 0.41 | 0.13 | 0.96 | 0.11 | 0.78 | 0.08 | 0.5  | 0.71 | 0.02 | 0.74 | 0.01 | At3g01550 | putative phosphate/phosphoenolpyruvate translocator | AY037244  |          |          | AV825592 | AV791676 |          |
| RAFL05-14-K23                            | 0.31 | 0.14 | 0.52 | 0.1  | 1.16 | 0.15 | 3.37 | 0.35 | 6.36 | 1.66 | 5.82 | 0.71 | 2.23 | 0.61 | 2.41 | 0.45 | 2.39 | 0.1  | 0.65 | 0.54 | 1.07 | 0.12 | 0.38 | 0.16 | 0.17 | 0.01 | 0.09 | 0.01 | 0.76 | 0.16 | 0.47 | 0.04 | 0.2  | 0.03 | 0.19 | 0.03 | 0.18 | 0.03      | At2g28900   | putative membrane channel protein                             | AY045593 |          |          | AV823046 | AV783944 |
| RAFL09-10-E02                            | 1.05 | 0.06 | 1.07 | 0.26 | 3.08 | 1.21 | 1.89 | 0.69 | 1.56 | 0.33 | 2.09 | 0.12 | 2.06 | 0.02 | 2.33 | 0.05 | 2.34 | 0.34 | 1.26 | 0.26 | 1.92 | 0.32 | 1.19 | 0.26 | 1.32 | 0.29 | 1.61 | 0.62 | 1.19 | 0.29 | 1.09 | 0.31 | 0.87 | 0.18 | 1.09 | 0.25 | 0.63 | 0.37      | At1g78900   | vacuolar-type H+-ATPase subunit A (VHA-A)                     |          | 3.6.3.14 |          | AV826988 | AV796959 |
| RAFL09-14-H22                            | 1.14 | 0.31 | 1.34 | 0.05 | 1.19 | 0.1  | 0.92 | 0.11 | 0.83 | 0.06 | 3.07 | 1.01 | 2.36 | 0.08 | 2.07 | 0.24 | 2.04 | 0.44 | 1.44 | 0.61 | 2.98 | 0.13 | 2.12 | 0.83 | 1.54 | 0.25 | 2.14 | 0.82 | 0.94 | 0.14 | 0.76 | 0.08 | 0.96 | 0.02 | 0.83 | 0.29 | 0.83 | 0.09      | At2g38170   | Ca2+ antiporter like protein                                  | AF372938 |          |          | AV827360 | AV797971 |
| RAFL09-13-N02                            | 1.05 | 0.54 | 1.42 | 0.22 | 1.69 | 0.4  | 1.89 | 0.6  | 3.09 | 0.07 | 2.46 | 1.03 | 1.55 | 0.02 | 1.51 | 0.46 | 1.54 | 0.18 | 0.37 | 0.1  | 0.49 | 0.08 | 0.4  | 0.18 | 0.38 | 0.06 | 0.38 | 0.09 | 0.63 | 0.07 | 0.49 | 0.08 | 0.54 | 0.04 | 0.55 | 0.2  | 0.65 | ####      | At2g40460   | putative PTR2 family peptide transporter                      | AY094400 |          |          |          |          |
| RAFL09-16-N06                            | 1.08 | 0.77 | 1.78 | 0.56 | 2.51 | 1.86 | 1.67 | 0.14 | 3.55 | 1.31 | 1.81 | 1    | 1.47 | 0.08 | 1.44 | 0.14 | 2.36 | 0.7  | 0.55 | 0.19 | 0.34 | 0.05 | 0.32 | 0.07 | 0.35 | 0.13 | 0.38 | 0.04 | 0.42 | 0.09 | 0.33 | 0.05 | 0.35 | 0.02 | 0.66 | 0.52 | 0.47 | 0.14      | At2g47420   | putative sugar transporter protein                            | AF360170 |          |          | AV827555 | AV798600 |
| RAFL09-10-N07                            | 1.34 | 0.7  | 2.65 | 0.72 | 3.81 | 0.92 | 1.66 | 0.41 | 2.17 | 0.33 | 2.11 | 0.47 | 2.02 | 0.39 | 2.39 | 1.21 | 1.97 | 0.01 | 0.66 | 0.12 | 0.68 | 0.1  | 0.65 | 0.27 | 0.66 | 0.21 | 0.97 | 0.49 | 0.78 | 0.16 | 0.65 | 0.24 | 0.61 | 0.05 | 0.76 | 0.08 | 0.94 | 0.24      | At5g03555   | uracil transporter - like protein                             | AY058195 |          |          | AV827054 | AV797115 |
| RAFL09-18-C22                            | 1.02 | 0.93 | 1.99 | 0.22 | 2.29 | 0.6  | 2.03 | 0.21 | 3.21 | 1.92 | 3.47 | 0.15 | 4.45 | 0.6  | 3.92 | 1.24 | 4.77 | 1.04 | 0.39 | 0.04 | 0.51 | 0.08 | 0.44 | 0.16 | 0.35 | 0.11 | 0.55 | 0.01 | 0.45 | 0.09 | 0.33 | 0.09 | 0.24 | 0.02 | 0.42 | 0.06 | 0.25 | 0.11      | At5g14570   | high affinity nitrate transporter - like protein              | AY035065 |          |          | AV827678 | AV798961 |
| Water channel protein                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |          |          |          |          |          |
| RAFL03-08-H22                            | 1.16 | 0.19 | 1.1  | 0.26 | 0.97 | 0.19 | 1.45 | 0.12 | 3.44 | 0.42 | 1.4  | 0.19 | 0.66 | 0.02 | 0.74 | 0.07 | 0.62 | 0.18 | 1.06 | 0.16 | 0.78 | 0.07 | 0.59 | 0.17 | 0.61 | 0.02 | 0.4  | 0.03 | 0.96 | 0.18 | 0.82 | 0.18 | 1.42 | 0.13 | 1.28 | 0.05 | 1.66 | 0.5       | At2g39010   | putative aquaporin (water channel protein)                    | AY045690 |          |          | AV821330 | AV781727 |
| Unknown                                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |          |          |          |          |          |
| RAFL07-15-F02                            | 0.85 | 0.22 | 1.16 | 0.11 | 1.54 | 0.11 | 1.42 | 0.37 | 2.64 | 0.37 | 3.2  | 0.81 | 2.22 | 0.1  | 2.3  | 0.1  | 2.61 | 0.49 | 0.75 | 0.13 | 0.77 | 0.01 | 0.48 | 0.11 | 0.51 | 0.05 | 0.54 | 0.12 | 0.74 | 0.11 | 0.53 | 0.12 | 0.38 | 0.62 | 0.01 | 0.51 | 0.2  | At1g71040 | putative spore coat protein                         | AY062464  |          |          | AV825815 | AV792498 |          |
| RAFL05-03-J08                            | 0.47 | 0.14 | 0.71 | 0.17 | 1.72 | 0.21 | 3.57 | 0.12 | 6.14 | 1.25 | 4.39 | 0.63 | 2.02 | 0.11 | 2.03 | 0.45 | 1.76 | 0.08 | 0.53 | 0.15 | 0.38 | 0.02 | 0.2  | 0.03 | 0.21 | 0.05 | 0.16 | 0    | 0.52 | 0.06 | 0.33 | 0.04 | 0.34 | 0.01 | 0.42 | 0.04 | 0.49 | 0.12      | At3g05880   | low temperature and salt responsive protein LT16A             | AY037244 |          |          | AV822237 | AV782939 |
| RAFL06-07-E01                            | 0.28 | 0.17 | 0.6  | 0.08 | 2.39 | 5.1  | 1.12 | 6.96 | 3.3  | 6.18 | 1.51 | 4.23 | 1.16 | 3.71 | 0.39 | 3.59 | 0.27 | 0.55 | 0.43 | 0.74 | 0.24 | 0.21 | 0.02 | 0.17 | 0.07 | 0.16 | 0.06 | 0.85 | 0.22 | 0.35 | 0.09 | 0.14 | 0.02 | 0.21 | 0.11 | 0.22 | 0.01 | At4g30650 | low temperature and salt responsive protein homolog | AY037263  |          |          | AV823661 | AV784669 |          |
| RAFL05-03-P08                            | 0.67 | 0.12 | 0.75 | 0.07 | 1.12 | 0.17 | 2.09 | 0.14 | 3.31 | 0.94 | 3.32 | 0.08 | 1.66 | 0.36 | 1.63 | 0.26 | 1.7  | 0.25 | 0.78 | 0.02 | 0.67 | #### | 0.27 | 0.04 | 0.14 | 0.01 | 0.32 | 0    | 0.77 | 0.17 | 0.56 | 0.2  | 0.44 | 0.03 | 0.63 | 0.17 | 0.53 | 0.08      | At3g09390   | metallothionein-like protein (AtMT-K)                         | AY037263 |          |          |          | AV782969 |
| RAFL08-16-B13                            | 0.57 | 0.12 | 0.59 | 0.13 | 0.84 | 0.09 | 1.03 | 0.07 | 1.55 | 0.03 | 2.42 | 0.15 | 2.54 | 0.14 | 2.52 | 1.08 | 3.46 | 1.39 | 1.15 | 0.36 | 1.74 | 0.15 | 1.6  | 0.09 | 1.85 | 0.22 | 1.16 | 0.22 | 0.89 | 0.4  | 0.72 | 0.39 | 0.57 | 0.01 | 0.69 | 0.26 | 0.5  | 0.12      | At2g17390   | putative glucanase  | AY142547 |          |          |          | AV795121 |
| RAFL09-11-I09                            | 1.15 | 0.21 | 1.9  | 0.26 | 4.21 | 0.64 | 4.46 | 0.11 | 2.98 | 1.05 | 1.5  | 0.06 | 1.26 | 0.26 | 1.28 | 0.06 | 1.31 | 0.14 | 0.64 | 0.26 | 0.75 | 0.21 | 0.63 | 0.23 | 0.59 | 0.12 | 0.61 | 0.31 | 0.95 | 0.06 | 1.18 | 0.26 | 0.89 | 0.06 | 1.03 | 0.2  | 1.05 | 0.21      | At4g35320   | unknown protein   | AF361581 |          |          | AV821117 | AV797288 |
| RAFL08-18-A14                            | 1.34 | 0.35 | 1.2  | 0.05 | 2.06 | 4.1  | 2.61 | 0.84 | 3.35 | 0.38 | 1.76 | 0.49 | 1.31 | 0.27 | 1.24 | 0.21 | 1.21 | 0.01 | 0.77 | 0.38 | 0.56 | 0.02 | 0.42 | 0.09 | 0.47 | 0.17 | 0.45 | 0.06 | 0.94 | 0.08 | 1.38 | 0.25 | 1.59 | 0.25 | 1.61 | 0.15 | 1.41 | 0.1       | 1_0_164751  | Hypothetical protein  |          |          |          | AV826564 | AV795530 |
| RAFL11-02-B04                            | 1.35 | 0.27 | 1.25 | 0.4  | 1.56 | 0.12 | 1.7  | 0.09 | 2.41 | 0.16 | 3.52 | 0.08 | 1.26 | 0.24 | 1.03 | 0.3  | 0.83 | 0.21 | 1.27 | 0.73 | 1    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |           |   |   |          |          |          |          |          |















| Plant defense-related protein           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Accession numbers |      | EC numbers |      |      |      |      |      |      |      |      |      |      |      |           |                                    |           |   |  |          |          |          |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------------------|------|------------|------|------|------|------|------|------|------|------|------|------|------|-----------|------------------------------------|-----------|---|--|----------|----------|----------|
| RAFL04-12-M04                           | 0.85 | 0.34 | 0.79 | 0.17 | 0.54 | 0.23 | 0.28 | 0    | 0.22 | 0.05 | 0.24 | 0.01 | 0.46 | 0.11 | 0.51 | 0.27 | 0.43 | 0.05 | 1.22 | 0.23 | 1.16 | 0.03              | 1.52 | 0.58       | 1.15 | 0.59 | 1.31 | 0.09 | 1.19 | 0.46 | 1.07 | 0.41 | 1.45 | 0.23 | 0.73 | 0.2       | 0.82                               | 0.38      | At5g49730   | FRO2-like protein; NADPH oxidase-like                            | AY091140 | AV821506 | AV781989 |
| RAFL05-20-B01                           | 1.45 | 1.53 | 1.58 | 1.05 | 1.2  | 0.46 | 1.44 | 0.56 | 1.06 | 0.5  | 0.31 | 0.14 | 0.28 | 0.2  | 0.28 | 0.35 | 0.28 | 0.24 | 0.91 | 0.44 | 0.5  | 0.09              | 0.66 | 0.29       | 0.82 | 0.17 | 0.95 | 0.06 | 1.73 | 0.21 | 1.7  | 0.21 | 1.73 | 0.02 | 1.33 | 0.07      | 2.41                               | 0.37      | At2g40000   | putative nematode-resistance protein                             | AY080778 | AV823516 | AV784500 |
| RAFL02-09-C13                           | 0.79 | 0.26 | 0.42 | 0.02 | 0.3  | 0.16 | 0.5  | 0.23 | 0.6  | 0.1  | 0.41 | 0.14 | 0.39 | 0.48 | 0.06 | 0.41 | 0.03 | 1.01 | 0.06 | 0.83 | 0.13 | 1.11              | 0.09 | 1.47       | 0.33 | 1.07 | 0.2  | 0.98 | 0.15 | 1.2  | 0.2  | 1.36 | 0.48 | 1.22 | 0.22 | 1.71      | 0.41                               | At4g28240 | putative wound induced protein                      | AF372913   | AV821191 | AV781503 |          |
| RAFL05-17-F04                           | 0.89 | 0.47 | 0.38 | 0.02 | 0.31 | 0.03 | 0.62 | 0.06 | 0.57 | 0.09 | 0.43 | 0.03 | 0.46 | 0.04 | 0.38 | 0.05 | 0.51 | 0.07 | 1.15 | 0.19 | 1    | 0.23              | 1.19 | 0.22       | 1.5  | 0.13 | 1.33 | 0.13 | 1    | 0.13 | 1.05 | 0.09 | 1.17 | 0.03 | 1.39 | 0.12      | 1.54                               | 0.09      | At4g28240   | putative wound induced protein                                   | AY050439 | AV823273 | AV784207 |
| Proteolytic degradation                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Accession numbers |      | EC numbers |      |      |      |      |      |      |      |      |      |      |      |           |                                    |           |   |  |          |          |          |
| RAFL09-13-C17                           | 0.89 | 0.36 | 0.66 | 0.09 | 0.72 | 0.23 | 0.7  | 0.22 | 0.58 | 0.22 | 0.44 | 0.01 | 0.38 | 0.16 | 0.34 | 0.07 | 0.32 | 0.04 | 0.98 | 0.02 | 0.8  | 0.15              | 1.11 | 0.22       | 1.48 | 1.15 | 0.21 | 1.09 | 0.2  | 1.27 | 1.82 | 1.16 | 0.24 | 2.5  |      | At4g21650 | subtilisin proteinase like protein |           | AV827264  | AV797702   |          |          |          |
| RNA-binding protein                     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Accession numbers |      | EC numbers |      |      |      |      |      |      |      |      |      |      |      |           |                                    |           |   |  |          |          |          |
| RAFL04-16-B18                           | 0.28 | 0.13 | 0.37 | 0.08 | 0.72 | 0.26 | 1.78 | 1.25 | 2.31 | 2.07 | 2.96 | 2.04 | 1.95 | 2.02 | 1.78 | 1.31 | 1.89 | 1.51 | 0.6  | 0.35 | 0.59 | 0.13              | 0.24 | 0.07       | 0.58 | 0.25 | 0.6  | 0.07 | 0.53 | 0.22 | 0.24 | 0.03 | 0.23 | 0.01 | 0.58 | 0.01      | 0.6                                | 0.02      | At2g21660   | glycine-rich RNA binding protein                                 | AY042826 | AV821764 |          |
| Senescence-related protein              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Accession numbers |      | EC numbers |      |      |      |      |      |      |      |      |      |      |      |           |                                    |           |   |  |          |          |          |
| RAFL02-09-H01                           | 1.34 | 1.81 | 0.86 | 0.75 | 0.42 | 0.08 | 0.46 | 0.13 | 0.25 | 0.02 | 0.52 | 0.08 | 0.4  | 0.17 | 0.51 | 0.17 | 0.35 | 0.24 | 2.48 | 0.99 | 2.43 | 0                 | 8.86 | 4.76       | 11.1 | 7.59 | 4.95 | 5.91 | 1.97 | 0.79 | 3.86 | 1.75 | 12.7 | 2.16 | 7.11 | 6.09      | 8.82                               | 5.85      | At4g35770   | senescence-associated protein sen1                               | AY078973 | AV821198 | AV781512 |
| Storage protein                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Accession numbers |      | EC numbers |      |      |      |      |      |      |      |      |      |      |      |           |                                    |           |   |  |          |          |          |
| RAFL05-12-E24                           | 0.41 | 0.34 | 0.3  | 0.14 | 0.74 | 0.58 | 0.64 | 0.49 | 0.53 | 0.03 | 0.21 | 0.14 | 0.19 | 0.12 | 0.11 | 0.03 | 0.17 | 0.05 | 0.92 | 0.11 | 0.76 | 0.09              | 0.79 | 0.2        | 0.69 | 0.1  | 0.58 | 0.06 | 0.97 | 0.01 | 0.93 | 0.02 | 0.9  | 1.05 | 0.1  | 1         | ####                               | At5g24780 | vegetative storage protein Vsp1                     | AF386930   | AV822842 | AV783698 |          |
| RAFL08-10-I23                           | 0.49 | 0.57 | 0.28 | 0.11 | 0.51 | 0.58 | 0.75 | 0.7  | 0.54 | 0.15 | 0.2  | 0.12 | 0.13 | 0.1  | 0.12 | 0.02 | 0.13 | 0.08 | 1.04 | 0.49 | 0.79 | 0.01              | 0.78 | 0.05       | 0.59 | 0.05 | 0.64 | 0.05 | 1.02 | 0.12 | 1.02 | 0.14 | 1.01 | 1.22 | 0.07 | 1.25      | 0.27                               | At5g24770 | vegetative storage protein Vsp2                     | AY048282   | AV826170 | AV793866 |          |
| RAFL08-11-G08                           | 0.46 | 0.53 | 0.25 | 0.1  | 0.5  | 0.64 | 0.75 | 0.8  | 0.5  | 0.18 | 0.17 | 0.11 | 0.09 | 0.09 | 0.08 | 0.03 | 0.1  | 0.07 | 0.97 | 0.49 | 0.76 | 0.08              | 0.69 | 0.09       | 0.49 | 0.11 | 0.54 | 0    | 1.03 | 0.13 | 1.02 | 0.35 | 0.93 | 1.33 | 0.37 | 1.11      | 0.41                               | At5g24770 | vegetative storage protein Vsp2                     |  | AV826219 | AV794068 |          |
| RAFL06-11-F24                           | 0.39 | 0.32 | 0.24 | 0.1  | 0.48 | 0.52 | 0.64 | 0.67 | 0.43 | 0.27 | 0.2  | 0.1  | 0.15 | 0.04 | 0.14 | 0.05 | 0.13 | 0.07 | 0.85 | 0.13 | 0.71 | 0.18              | 0.63 | 0.01       | 0.68 | 0.07 | 0.59 | 0.09 | 0.95 | 0.06 | 0.87 | 0.08 | 0.97 | 1.19 | 0.15 | 1.05      | 0.12                               | At5g24770 | vegetative storage protein Vsp2                     | AY092991   | AV823976 | AV785076 |          |
| RAFL08-15-M16                           | 0.42 | 0.43 | 0.24 | 0.11 | 0.56 | 0.71 | 0.83 | 0.67 | 0.45 | 0.27 | 0.22 | 0.12 | 0.13 | 0.11 | 0.11 | 0.01 | 0.1  | 0.05 | 0.92 | 0.36 | 0.81 | 0.02              | 0.63 | 0.02       | 0.66 | 0.09 | 0.45 | 0.1  | 0.98 | 0.2  | 0.99 | 0.22 | 0.82 | 1.28 | 0.31 | 1         | 0.49                               | At5g24770 | vegetative storage protein Vsp2                     | AY050819   | AV826467 | AV795052 |          |
| RAFL08-10-N14                           | 0.41 | 0.5  | 0.24 | 0.11 | 1.24 | 0.28 | 0.7  | 0.5  | 0.4  | 0.27 | 0.38 | 0.59 | 0.27 | 0.51 | 0.27 | 0.5  | 1.08 | 0.89 | 0.3  | 0.9  | 0.26 | 0.8               | 0.3  | 0.75       | 0.17 | 0.44 | 0.13 | 1.1  | 0.25 | 0.98 | 0.1  | 1.11 | 0.08 | 1.33 | 0.06 | At5g24770 | vegetative storage protein Vsp2    | BT000762  | AV826186  | AV793929   |          |          |          |
| Transport protein, ion channel, carrier |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Accession numbers |      | EC numbers |      |      |      |      |      |      |      |      |      |      |      |           |                                    |           |   |  |          |          |          |
| RAFL05-14-K23                           | 0.31 | 0.14 | 0.52 | 0.1  | 1.16 | 0.15 | 3.37 | 0.35 | 6.36 | 1.66 | 5.82 | 0.71 | 2.23 | 0.61 | 2.41 | 0.45 | 2.39 | 0.1  | 0.65 | 0.54 | 1.07 | 0.12              | 0.38 | 0.16       | 0.17 | 0.01 | 0.09 | 0.01 | 0.76 | 0.16 | 0.47 | 0.04 | 0.2  | 0.03 | 0.19 | 0.03      | 0.18                               | 0.03      | At2g28900   | putative membrane channel protein                                | AY045593 | AV823046 | AV783944 |
| RAFL09-12-Q21                           | 1.28 | 0.47 | 1.04 | 0.13 | 0.82 | 0.01 | 0.82 | 0.03 | 0.48 | 0.05 | 0.38 | 0.03 | 0.29 | 0.18 | 0.28 | 0.02 | 0.33 | 0.08 | 0.98 | 0.49 | 1.08 | 0.07              | 1.21 | 0.25       | 1.47 | 0.02 | 1.51 | 0.06 | 1.07 | 0.19 | 1.45 | 0.23 | 1.8  | 0.08 | 1.67 | 0.22      | 2.26                               | 0.36      | At4g17340   | membrane channel like protein                                    | AF367283 |          | AV797649 |
| RAFL03-06-H04                           | 1.04 | 0.31 | 0.75 | 0.08 | 0.67 | 0.04 | 0.55 | 0.12 | 0.39 | 0    | 0.29 | 0.01 | 0.41 | 0.01 | 0.43 | 0.06 | 0.39 | 0.02 | 1.2  | 0.62 | 1.06 | 0.29              | 1.79 | 0.18       | 1.65 | 0.31 | 1.1  | 0.23 | 1.29 | 0.28 | 1.62 | 0.05 | 1.72 | 0.06 | 1.15 | 0.46      | 1.4                                | 0.25      | At5g46110   | phosphate/triose-phosphate translocator precursor (gb)AAC83815.1 | AY037211 | AV821291 | AV781652 |
| Unknown protein                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Accession numbers |      | EC numbers |      |      |      |      |      |      |      |      |      |      |      |           |                                    |           |   |  |          |          |          |
| RAFL08-13-A03                           | 0.95 | 0.55 | 0.76 | 0.23 | 0.89 | 0.18 | 0.81 | 0.36 | 0.56 | 0.01 | 0.3  | 0.06 | 0.31 | 0.1  | 0.27 | 0.09 | 0.31 | 1.13 | 0.4  | 0.85 | 0.16 | 0.81              | 0.11 | 0.85       | 0.08 | 0.8  | 0.17 | 1.06 | 0.35 | 1.01 | 0.17 | 1.1  | 0.13 | 1.74 | 0.38 | 1.17      | 0.16                               | At1g63010 | putative tetracycline resistance efflux protein     | BT000805   | AV826342 | AV794465 |          |
| RAFL06-07-E01                           | 0.28 | 0.17 | 0.6  | 0.08 | 2.39 | 5.1  | 1.12 | 6.96 | 3.3  | 6.18 | 1.51 | 4.23 | 1.16 | 3.71 | 0.39 | 3.59 | 0.27 | 0.55 | 0.43 | 0.74 | 0.24 | 0.21              | 0.02 | 0.17       | 0.07 | 0.16 | 0.06 | 0.85 | 0.22 | 0.35 | 0.09 | 0.14 | 0.02 | 0.21 | 0.11 | 0.22      | 0.01                               | At4g30650 | low temperature and salt responsive protein homolog |  | AV823661 | AV784669 |          |
| RAFL11-12-B03                           | 1.17 | 0.11 | 1    | 0.14 | 0.88 | 0.39 | 0.65 | 0.22 | 0.29 | 0.1  | 0.37 | 0.17 | 0.38 | 0.03 | 0.52 | 0.11 | 0.5  | 0.12 | 1.04 | 0.05 | 1.04 | 0.12              | 1.59 | 0.32       | 1.7  | 0.53 | 1.18 | 0.25 | 0.99 | 0.12 | 1.2  | 0.2  | 1.33 | 0.25 | 1.36 | 0.05      | 1.4                                | 0.14      | At4g14040   | selenium-binding protein (Z97335.13)                             | AY136288 | AV832337 | AV820748 |
| RAFL11-03-D14                           | 1.12 | 0.81 | 0.83 | 0.25 | 0.87 | 0.47 | 0.83 | 0.24 | 0.36 | 0.09 | 0.2  | 0.07 | 0.29 | 0    | 0.3  | 0.06 | 0.4  | 0.03 | 1.15 | 0.45 | 0.9  | 2.79              | 0.44 | 3.42       | 0.04 | 1.33 | 0.93 | 0.92 | 0.22 | 1.09 | 0.23 | 1.65 | 0.01 | 2.89 | 0.09 | 2.28      | 0.45                               | At3g16420 | putative lectin                                     | AF370488   | AV832122 | AV819258 |          |
| RAFL03-03-J03                           | 0.94 | 0.44 | 0.81 | 0.37 | 1.09 | 0.72 | 0.69 | 0.17 | 0.33 | 0.12 | 0.24 | 0.06 | 0.28 | 0.13 | 0.21 | 0.12 | 0.25 | 0.1  | 0.76 | 0.45 | 0.64 | 0.06              | 1.62 | 0.27       | 1.63 | 0.1  | 1.82 | 0.35 | 0.97 | 0.1  | 0.81 | 0.03 | 0.9  | 0.14 | 2.32 | 0.83      | 2.86                               | 1.04      | At3g16450   | putative lectin  | AF380655 | AV821255 |          |
| RAFL08-08-E14                           | 0.25 | 0.04 | 0.35 | 0.06 | 0.73 | 0.04 | 1.36 | 0.06 | 2.24 | 0.63 | 1.84 | 0.61 | 0.93 | 0.05 | 0.86 | 0.18 | 1.17 | 0.17 | 0.55 | 0.35 | 0.64 | 0.02              | 1.66 | 0.04       | 0.11 | 0.01 | 0.14 | 0    | 0.66 | 0.18 | 0.32 | 0.09 | 0.14 | 0.01 | 0.22 | 0.01      | 0.21                               | 0.1       | At1g13930   | putative hydroxyproline-rich glycoprotein                        | AY045640 | AV826041 | AV793378 |
| RAFL09-10-J16                           | 1.3  | 0.86 | 0.92 | 0.34 | 0.91 | 0.23 | 0.64 | 0.29 | 0.27 | 0.01 | 0.29 | 0.04 | 0.28 | 0.1  | 0.25 | 0.02 | 0.26 | 0.06 | 1.52 | 0.69 | 1.09 | 0.08              | 1.37 | 0.62       | 1.93 | 0.14 | 1.78 | 0.35 | 0.94 | 0.13 | 1.3  | 0.52 | 1.52 | 0.23 | 2.32 | 1.28      | 1.91                               | 0.12      | 1_1_208615  | **** No hits found ****  |          |          |          |
| RAFL04-09-M23                           | 0.93 | 0.37 | 0.61 | 0.12 | 0.41 | 0.01 | 0.39 | 0.02 | 0.43 | 0.09 | 0.32 | 0.01 | 0.36 | 0.03 | 0.3  | 0.07 | 0.26 | 0.07 | 1.13 | 0.45 | 0.96 | 0.14              | 1.14 | 0.09       | 1.11 | 0.02 | 0.85 | 0.22 | 1.14 | 0.38 | 1.39 | 0.04 | 1.93 | 0.15 | 1.23 | 0.65      | 1.3                                | 0.13      | 2_1_140765  | **** No hits found ****  |          |          |          |
| RAFL07-11-H13                           | 1.81 | 0.38 | 1.52 | 0.44 | 1.91 | 0.48 | 1.39 | 0.34 | 1.05 | 0.13 | 0.52 | 0.27 | 0.17 | 0.11 | 0.16 | #### | 0.12 | 0.02 | 1.05 | 0.89 | 0.96 | 0.1               | 0.42 | 0.07       | 0.26 | 0.11 | 0.24 | 0.13 | 1.64 | 0.23 | 1.7  | 0.4  | 2.26 | 0.4  | 1.64 | 0.64      | 1.78                               | 0.78      | 3_1_1951  | **** No hits found ****  |          |          |          |
| RAFL07-11-C14                           | 3.03 | 4.67 | 1.29 | 0.63 | 0.87 | 0.03 | 0.72 | 0.01 | 0.29 | 0.23 | 0.31 | 0.01 | 0.37 | 0.04 | 0.34 | 0.08 | 0.28 | 0.01 | 3.63 | 1.75 | 3.26 | 0.66              | 9.45 | 2.57       | 12.9 | 3.94 | 9.87 | 3.22 | 1.7  | 0.26 | 4.45 | 0.6  | 13.1 | 2.01 | 9.15 | 0.54      | 12.1                               | 1.38      | 4_1_129334  | **** No hits found ****  |          |          |          |
| RAFL04-16-H01                           | 0.87 | 0.12 | 0.95 | 0.24 | 0.83 | 0.11 | 0.74 | 0.12 | 0.68 | 0.33 | 0.67 | 0.2  | 0.5  | 0.31 | 0.3  | 0.73 | 0.27 | 0.85 |      |      |      |                   |      |            |      |      |      |      |      |      |      |      |      |      |      |           |                                    |           |   |  |          |          |          |

Supplemental Table 4-4-4. Genes down-regulated specifically in the dehydration identified by the 7k microarray analysis in dehydration 1)

| Func Gene                                      | Ratio(Dehydration/Unstressed)2 |      |      |      |      |      |      |      | Ratio(Rehydration after dehydration/ 2hr dehydration)3 |      |      |      |      |      |      |      | Ratio(Rehydration after dehydration/ 5hr dehydration)3 |      |      |      | Accession Genbank | Accession EC | Accession No. (5) <sup>6)</sup>                        | Accession No. (3) <sup>7)</sup> |             |              |          |  |
|--|--------------------------------|------|------|------|------|------|------|------|--|------|------|------|------|------|------|------|--|------|------|------|-------------------|--------------|--|---------------------------------|-------------|--------------|----------|--|
|  | 1hr                            |      | 2hr  |      | 5hr  |      | 10hr |      | 1hr  |      | 2hr  |      | 5hr  |      | 10hr |      | 2hr  |      | 24hr |      |                   |              |  |                                 |             |              |          |  |
|  | Av.                            | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. | Av.  | Std. |                   |              |  |                                 | AGI code(s) | Annotations) |          |  |
| <b>Regulatory proteins</b>                     |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| <b>F-box protein</b>                           |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| RAFL05-10-O23                                  | 0.22                           | 0.04 | 0.4  | 0.13 | 0.98 | 0.38 | 0.7  | 1.1  | 0.12   | 2.24 | 0.26 | 2.4  | 3.43 | 3.13 | 0.1  | 2.38 | 0.34   | 0.74 | 0.11 | 1.73 | 0.67              | At1g23390    | unknown protein  | AY120706                        | AV822733    | AV783557     |          |  |
| <b>Nucleic Acids-related protein</b>           |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| RAFL09-15-J08                                  | 0.6                            | 0.02 | 0.51 | 0.07 | 0.28 | 0.09 | 0.24 | 1.3  | 0.43   | 2.77 | 0.23 | 2.49 | 0.65 | 2.12 | 1.36 | 2.38 | 0.78   | 3.62 | 0.88 | 3.64 | 0.69              | At2g30620    | putative histone H1 protein                            | AF360211                        | AV827449    | AV798261     |          |  |
| <b>Protein kinase</b>                          |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| RAFL07-12-G24                                  | 0.89                           | 0.12 | 0.48 | 0.15 | 0.24 | 0.14 | 0.29 | 1.48 | 0.49   | 2.64 | 0.02 | 2.42 | 0.98 | 1.95 | 0.51 | 2.22 | 0.42   | 2.3  | 0.46 | 3.68 | 0.28              | At4g39400    | brassinosteroid insensitive 1 gene (BR11)              | AY062560                        | AV791881    |              |          |  |
| RAFL04-18-B02                                  | 0.78                           | 0.25 | 0.49 | 0.04 | 0.28 | 0.03 | 0.25 | 0.91 | 0.12   | 1.9  | 0.29 | 2.51 | 1.91 | 1.61 | 0.01 | 1.82 | 0.36   | 1.08 | 0.33 | 2.78 | 0.36              | At1g31420    | hypothetical protein                                   | AY062561                        | AV821919    | AV782503     |          |  |
| <b>Protein phosphatase</b>                     |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| RAFL07-14-E15                                  | 0.61                           | 0.1  | 0.66 | 0.19 | 0.4  | 0.07 | 0.32 | 1.41 | 0.17   | 2.01 | 0.3  | 2.94 | 0.95 | 2.13 | 0.21 | 1.57 | 0.18   | 1.51 | 0.11 | 3.77 | 0.81              | At4g38520    | putative protein phosphatase-2c                        | AY062454                        | AV825758    | AV792278     |          |  |
| RAFL07-16-L12                                  | 0.54                           | 0.06 | 0.52 | 0.03 | 0.33 | 0.05 | 0.27 | 0.54 | 0.02   | 0.55 | 0.05 | 0.71 | 0.15 | 0.64 | 0.17 | 0.51 | 0.03   | 0.8  | 0.12 | 1    | 0.18              | At5g53140    | protein phosphatase 2C-like                            | AY065026                        |             | AV792802     |          |  |
| RAFL07-09-P04                                  | 0.46                           | 0.06 | 0.44 | 0.1  | 0.26 | 0.08 | 0.18 | 0.56 | 0.01   | 0.48 | 0.03 | 0.75 | 0.14 | 0.52 | 0.08 | 0.38 | 0.11   | 0.51 | 0.07 | 0.68 | 0.27              | At5g53140    | protein phosphatase 2C-like                            |                                 |             | AV791305     |          |  |
| <b>Signaling</b>                               |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| RAFL07-08-J03                                  | 2.13                           | 0.49 | 1.2  | 0.18 | 0.5  | 0.2  | 0.32 | 1.13 | 0.19   | 1.17 | 0.58 | 2.15 | 0.42 | 1.71 | 0.1  | 0.71 | 0.06   | 1.24 | 0.25 | 1.9  | 1                 | At2g41090    | calcium binding protein (CaBP-22)                      | AY046044                        | AV825348    | AV791045     |          |  |
| <b>Transcription factor</b>                    |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| RAFL11-11-A10                                  | 0.4                            | 0.16 | 0.24 | 0.05 | 0.26 | 0.11 | 0.13 | 1.57 | 0.75   | 1.93 | 0.48 | 3.02 | 0.2  | 4.36 | 1.62 | 2.58 | 0.34   | 1.95 | 0.61 | 3.24 | 1.11              | At3g58120    | bZip transcription factor AtbZip61                     | AY093053                        | AV832309    | AV820556     |          |  |
| RAFL05-21-N20                                  | 0.22                           | 0.02 | 0.44 | 0.04 | 1    | 0.09 | 1.08 | 1.61 | 0.45   | 3.37 | 0.62 | 2.06 | 1.06 | 2.34 | 1.24 | 2.31 | 0.3  | 1.01 | 0.57 | 0.84 | 0.16              | At5g61590    | ethylene responsive element binding factor - like      | AY045968                        | AV823620    |              |          |  |
| RAFL08-17-G21                                  | 0.86                           | 0.21 | 0.44 | 0.11 | 0.36 | 0.06 | 0.29 | 0.83 | 0.24   | 1.33 | 0.06 | 1.16 | 0.29 | 1.28 | 0.4  | 1.39 | 0.19   | 1.02 | 0.13 | 1.76 | 0.4               | At5g64340    | Unknown protein (At5g64340; MSJ1.18)                   | AY062561                        | AV826538    | AV795396     |          |  |
| <b>Functional proteins</b>                     |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| <b>Auxin-regulated protein</b>                 |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| RAFL11-02-J01                                  | 0.53                           | 0.18 | 0.37 | 0.1  | 0.26 | 0.03 | 0.2  | 1.73 | 0.49   | 2.04 | 0.24 | 2.45 | 0.81 | 1.54 | 0.36 | 1.77 | 0.61   | 1.14 | 0.22 | 2.19 | 0.7               | At4g34760    | putative auxin-regulated protein                       | AY042802                        | AV832090    | AV819145     |          |  |
| <b>Carbohydrate metabolism-related protein</b> |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| <b>Cellular metabolism-related protein</b>     |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| RAFL05-14-G19                                  | 0.92                           | 0.09 | 0.52 | 0.11 | 0.32 | 0.03 | 0.29 | 0.88 | 0.06   | 2.12 | 0.08 | 3.5  | 0.25 | 3.64 | 0.25 | 3.53 | 0.59   | 1.74 | 0.46 | 6.25 | 2.05              | At5g13710    | 24-sterol C-methyltransferase                          | AY120716                        | 2.1.1.41    | AV823019     | AV783910 |  |
| RAFL06-13-H08                                  | 0.92                           | 0.03 | 0.58 | 0.14 | 0.4  | 0.13 | 0.33 | 1.1  | 0.35   | 1.98 | 0.03 | 2.49 | 0.59 | 1.56 | 0.16 | 1.6  | 0.06   | 0.82 | 0.05 | 1.43 | 0.24              | At1g32440    | putative pyruvate kinase, plastid isozyme (At1g32440)  | AY058121                        |             |              |          |  |
| RAFL06-13-H16                                  | 0.68                           | 0.14 | 0.58 | 0.06 | 0.4  | 0.04 | 0.29 | 0.8  | 0.12   | 0.5  | 0.04 | 0.68 | 0.24 | 0.84 | 0.13 | 0.66 | 0.09   | 0.72 | 0.53 | 0.86 | 0.15              | At1g11860    | aminomethyltransferase-like precursor protein          | AY125509                        | 2.1.2.10    | AV824095     | AV785243 |  |
| RAFL05-04-M03                                  | 0.66                           | 0.16 | 0.67 | 0.16 | 0.45 | 0.22 | 0.27 | 0.71 | 0.12   | 0.43 | 0.02 | 0.68 | 0.21 | 0.5  | 0.01 | 0.47 | 0.06   | 0.5  | 0.02 | 0.82 | 0.07              | At1g32470    | glycine cleavage system H protein precursor, putative  | AF385740                        | AV822316    | AV783039     |          |  |
| RAFL06-13-N10                                  | 0.75                           | 0.01 | 0.65 | 0.02 | 0.39 | 0.02 | 0.27 | 0.57 | 0.12   | 0.44 | 0.12 | 0.83 | 0.3  | 1.52 | 0.97 | 2.99 | 0.98   | 0.91 | 0.31 | 2.44 | 1.54              | At2g22980    | putative serine carboxypeptidase I                     | AF410326                        | AV824125    | AV785282     |          |  |
| RAFL06-07-K18                                  | 0.4                            | 0.06 | 0.43 | 0.08 | 0.31 | 0.07 | 0.22 | 0.67 | 0.12   | 0.77 | 0.06 | 0.83 | 0.21 | 1.05 | 0.45 | 0.77 | 0.04   | 0.7  | 0.17 | 1.06 | 0.15              | At4g09650    | H <sup>+</sup> -transporting ATP synthase-like protein | AY065158                        | 3.6.3.14    | AV823701     | AV784721 |  |
| RAFL09-11-L03                                  | 0.77                           | 0.09 | 0.74 | 0.19 | 0.3  | 0.18 | 0.2  | 0.63 | 0.03   | 0.33 | 0.07 | 0.62 | 0.13 | 0.48 | 0.52 | 1.22 | 0.22   | 0.37 | 0.08 | 2.96 | 0.7               | At5g65010    | asparagine synthetase (gb)AAC72837.1)                  | AF367340                        | 6.3.5.4     | AV827137     | AV797334 |  |
| <b>Cell wall-related protein</b>               |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| RAFL04-16-D03                                  | 0.55                           | 0.15 | 0.52 | 0.08 | 0.43 | 0.02 | 0.32 | 0.62 | 0.06   | 0.85 | 0.07 | 1.14 | 0.12 | 0.79 | 0.29 | 0.98 | 0.37   | 0.81 | 0.13 | 1.15 | 0.18              | At3g57790    | polygalacturonase, putative                            | AY065080                        |             | AV782311     |          |  |
| RAFL06-15-M08                                  | 0.72                           | 0.08 | 0.51 | 0.14 | 0.29 | 0.02 | 0.25 | 0.81 | 0.11   | 0.88 | 0.04 | 1.45 | 0.44 | 1.55 | 0.54 | 1.63 | 0.23   | 1.46 | 0.97 | 2.35 | 0.61              | At2g45470    | fasciilin-like arabinogalactan protein FLA8            | AY094443                        | AV824190    | AV785379     |          |  |
| RAFL04-19-N09                                  | 0.41                           | 0.05 | 0.38 | 0.03 | 0.3  | 0.05 | 0.21 | 0.59 | 0.05   | 1    | 0.12 | 1.46 | 0.08 | 1.61 | 0.4  | 1.74 | 0.4  | 0.75 | 0.21 | 1.78 | 0.54              | At3g07010    | putative pectate lyase                                 | AY062561                        | AV822011    | AV782628     |          |  |
| RAFL09-09-L11                                  | 0.51                           | 0.09 | 0.49 | 0.12 | 0.31 | 0.05 | 0.22 | 0.72 | 0.1  | 1.6  | 0.25 | 1.48 | 0.18 | 1.5  | 0.12 | 1.59 | 0.16   | 0.81 | 0.65 | 3.25 | 0.57              | At3g14310    | pectin methyltransferase like protein                  | AY058892                        | AV826937    | AV796821     |          |  |
| RAFL04-09-O24                                  | 1.53                           | 0.39 | 0.52 | 0.24 | 0.31 | 0.06 | 0.2  | 3.08 | 0.88   | 6.16 | 0.79 | 17.6 | 10.4 | 7.51 | 4.1  | 32.9 | 7.12   | 8.87 | 3.29 | 37.1 | 7.07              | At4g30270    | xyloglucan endo-1,4-beta-D-glucanase precursor         | AY035156                        | AV821416    | AV781861     |          |  |
| RAFL02-07-H03                                  | 0.6                            | 0.06 | 0.34 | 0.19 | 0.33 | 0.23 | 0.24 | 2.37 | 0.74   | 2.21 | 0.37 | 2.87 | 1.23 | 3.81 | 2    | 5.22 | 4.06   | 1.23 | 0.72 | 3.49 | 0.8               | At5g10430    | ATAGP4   |                                 |             |              |          |  |
| RAFL11-10-A22                                  | 0.58                           | 0.12 | 0.33 | 0.15 | 0.38 | 0.14 | 0.1  | 0.91 | 0.31   | 2.52 | 0.94 | 5.5  | 1.84 | 4.31 | 1.44 | 1.78 | 0.45   | 1.5  | 0.48 | 3.64 | 2.38              | At4g37800    | endo-xyloglucan transferase - like protein             | AY093025                        |             | AV820395     |          |  |
| RAFL11-11-H13                                  | 0.51                           | 0.06 | 0.22 | 0.13 | 0.15 | 0.07 | 0.17 | 3.24 | 1.69   | 7.16 | 0.77 | 5.89 | 2.17 | 1.52 | 0.15 | 1.83 | 0.86   | 1.8  | 0.2  | 3.27 | 0.18              | At4g03210    | putative xyloglucan endotransglycosylase               | AY072353                        | AV832320    | AV820630     |          |  |
| RAFL09-06-B09                                  | 0.71                           | 0.1  | 0.33 | 0.06 | 0.24 | 0.07 | 0.2  | 0.61 | 0.16   | 1.84 | 0.14 | 3.75 | 1.13 | 2.02 | 0.35 | 2.11 | 0.59   | 1.45 | 0.34 | 3.54 | 0.55              | At4g23820    | putative polygalacturonase                             | AY062697                        | AV826655    | AV795990     |          |  |
| RAFL07-10-K05                                  | 0.49                           | 0.11 | 0.24 | 0.18 | 0.33 | 0.16 | 0.23 | 1.68 | 0.32   | 14.6 | 7.24 | 34.8 | 14   | 9.8  | 3.81 | 23.5 | 0.52   | 1.59 | 0.37 | 26.4 | 7.74              | At4g14130    | xyloglucan endotransglycosylase-related protein XT     | AY045865                        | AV825528    | AV791464     |          |  |
| RAFL05-18-A21                                  | 0.66                           | 0.09 | 0.18 | 0.07 | 0.21 | 0.04 | 0.16 | 2.31 | 0.8  | 11   | 5.11 | 8.52 | 4.8  | 3.07 | 2.16 | 3.34 | 1.29   | 2.74 | 0.99 | 6.16 | 2                 | At5g65390    | arabinogalactan protein AGP7                           | AY050361                        | AV823332    | AV784821     |          |  |
| RAFL07-10-G09                                  | 0.86                           | 0.24 | 0.53 | 0.21 | 0.23 | 0.06 | 0.21 | 1.45 | 0.15   | 2.49 | 0.31 | 3.14 | 0.28 | 3.65 | 0.8  | 2.47 | 0.16   | 2.12 | 2.03 | 4.47 | 2.87              | At2g06850    | putative endoxyloglucan glycosyltransferase            | AY056201                        | AV825497    | AV791409     |          |  |
| EXGT-A1  | 1.02                           | 0.09 | 0.47 | 0.05 | 0.17 | 0.03 | 0.15 | 1.38 | 0.39   | 2.53 | 0.37 | 5.38 | 0.42 | 3.91 | 0.14 | 2.26 | 0.79   | 2.31 | 0.85 | 6.12 | 2.18              | At2g06850    | putative endoxyloglucan glycosyltransferase            | D16454.1                        |             |              |          |  |
| RAFL08-17-A06                                  | 1.37                           | 0.2  | 0.75 | 0.14 | 0.25 | 0.06 | 0.28 | 2.62 | 0.62   | 3.91 | 0.34 | 6.51 | 1.17 | 3.67 | 0.59 | 4.36 | 2.43   | 2.82 | 1.31 | 14.1 | 3.92              | At2g06850    | putative endoxyloglucan glycosyltransferase            | AY059873                        | AV826523    | AV795318     |          |  |
| RAFL11-02-K17                                  | 1.06                           | 0.1  | 0.63 | 0.22 | 0.2  | 0.07 | 0.24 | 1.7  | 0.25   | 3.47 | 0.36 | 4.58 | 1.95 | 4.83 | 1.79 | 2.81 | 0.33   | 3.29 | 0.36 | 7.18 | 2.2               | At2g06850    | putative endoxyloglucan glycosyltransferase            | AY054547                        | AV832096    | AV819163     |          |  |
| RAFL11-07-H22                                  | 1.33                           | 0.49 | 0.96 | 0.32 | 0.36 | 0.1  | 0.22 | 2.63 | 0.9  | 4    | 1.09 | 5.82 | 1.72 | 4.61 | 5.44 | 4.51 | 6.25   | 2.06 | 1.09 | 9.7  | 3                 | At2g06850    | putative endoxyloglucan glycosyltransferase            | AF386928                        | AV832252    | AV819842     |          |  |
| <b>Cytochrome P450</b>                         |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| RAFL07-18-B05                                  | 0.53                           | 0.11 | 0.86 | 0.23 | 0.44 | 0.07 | 0.24 | 0.58 | 0.06   | 1.27 | 0.17 | 0.77 | 0.23 | 1    | 0.25 | 1.34 | 0.03   | 1.8  | 0.38 | 2.03 | 0.23              | At1g13110    | putative cytochrome P450 monooxygenase                 | AF462855                        | 1.14.--     | AV825963     | AV793090 |  |
| <b>Cytoskeleton-related protein</b>            |                                |      |      |      |      |      |      |      |  |      |      |      |      |      |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |
| RAFL09-12-G15                                  | 0.82                           | 0.04 | 0.68 | 0.23 | 0.31 | 0.07 | 0.49 | 1.06 | 0.23   | 4.1  | 0.13 | 2.03 | 1.7  | 1.08 | 0.13 | 1.66 | 0.21   | 3.37 | 0.87 | 2.44 | 0.73              | At5g19770    | tubulin alpha-5 chain-like protein                     | AF367301                        | AV827205    | AV797513     |          |  |
| RAFL09-11-P11                                  | 0.58                           | 0.09 | 0.48 | 0.08 | 0.3  | 0.05 | 0.29 | 0.68 | 0.14   | 1.38 | 0.08 | 1.52 | 0.64 | 1.72 |      |      |  |      |      |      |                   |              |  |                                 |             |              |          |  |



**Supplemental Table 5. List of the up- or down- regulated genes 'in the process of cold acclimation and deacclimation in 9 groups.**

**A group**

|   |                                     |
|---|-------------------------------------|
| At5g57560 xyloglucan endotransglycosylase (TCH4)      | Cell wall-related protein           |
| At5g65010 asparagine synthetase (gb)AAC72837.1)       | Cellular metabolism-related protein |
| At3g12580 heat shock protein 70                       | Heat shock protein                  |
| At5g59220 protein phosphatase 2C (PP2C)               | Protein phosphatase                 |
| At2g26150 putative heat shock transcription factor    | Transcription factor                |
| At5g63160 putative protein                            | Unknown                             |
| At3g48360 putative protein                            | Unknown                             |
| At5g21940 unknown protein                             | Unknown                             |
| At1g14200 unknown protein                             | unknown protein                     |
| At1g35140 phosphate-induced (phi-1) protein, putative | unknown protein                     |

**B group**

|  |   |
|--|---|
| At5g54510 auxin-responsive-like protein                                  | Auxin-regulated protein                 |
| At4g27260 GH3 like protein   | Auxin-regulated protein                 |
| At1g02850 glycosyl hydrolase family 1                                    | Carbohydrate metabolism-related protein |
| At3g45230 hydroxyproline-rich glycoprotein-related                       | Carbohydrate metabolism-related protein |
| At5g20250 glycosyl hydrolase family 36                                   | Carbohydrate metabolism-related protein |
| At1g03870 fasciclin-like arabinogalactan-protein (FLA9)                  | Carbohydrate metabolism-related protein |
| At5g56870 glycosyl hydrolase family 35 (beta-galactosidase)              | Carbohydrate metabolism-related protein |
| At3g13750 glycosyl hydrolase family 35 (beta-galactosidase)              | Carbohydrate metabolism-related protein |
| At3g43190 sucrose synthase, putative                                     | Carbohydrate metabolism-related protein |
| At5g63600 flavonol synthase family                                       | Carbohydrate metabolism-related protein |
| At1g12780 uridine diphosphate glucose epimerase                          | Carbohydrate metabolism-related protein |
| At2g43820 putative glucosyltransferase                                   | Carbohydrate metabolism-related protein |
| At1g05560 UDP-glucose transferase(UGT1)                                  | Carbohydrate metabolism-related protein |
| At4g15550 glycosyltransferase like protein                               | Carbohydrate metabolism-related protein |
| At4g34138 similar to glucosyltransferase - like protein                  | Carbohydrate metabolism-related protein |
| At5g51970 sorbitol dehydrogenase-like protein                            | Carbohydrate metabolism-related protein |
| At5g65730 xyloglucan endotransglycosylase, putative                      | Cell wall-related protein               |
| At4g19420 pectinacetylsterase family                                     | Cell wall-related protein               |
| At5g49360 glycosyl hydrolase family 3                                    | Cell wall-related protein               |
| At1g55850 cellulose synthase catalytic subunit, putative                 | Cell wall-related protein               |
| At5g64570 glycosyl hydrolase family 3                                    | Cell wall-related protein               |
| At5g48900 polysaccharide lyase family 1 (pectate lyase)                  | Cell wall-related protein               |
| At4g25260 putative protein   | Cell wall-related protein               |
| At2g40610 expansin, putative   | Cell wall-related protein               |
| At5g47500 pectinesterase family  | Cell wall-related protein               |
| At4g14130 xyloglucan endotransglycosylase (XTR7)                         | Cell wall-related protein               |
| At5g5390 arabinogalactan-protein (AGP7)                                  | Cell wall-related protein               |
| At2g06850 xyloglucan endotransglycosylase (ext)EXGT-A1)                  | Cell wall-related protein               |
| At4g30270 xyloglucan endotransglycosylase (mer5B)                        | Cell wall-related protein               |
| At1g66200 glutamine synthetase, putative                                 | Cellular metabolism-related protein     |
| At1g64660 methionine/cystathionine gamma lyase, putative                 | Cellular metabolism-related protein     |
| At5g46180 ornithine aminotransferase                                     | Cellular metabolism-related protein     |
| At1g07610 metallothionein-like protein                                   | Cellular metabolism-related protein     |
| At4g15390 acyltransferase family   | Cellular metabolism-related protein     |
| At4g15560 DEF (CLA1) protein   | Cellular metabolism-related protein     |
| At2g28470 glycosyl hydrolase family 35 (beta-galactosidase)              | Cellular metabolism-related protein     |
| At1g78680 gamma glutamyl hydrolase, putative                             | Cellular metabolism-related protein     |
| At4g04610 5-adenylylsulfate reductase                                    | Cellular metabolism-related protein     |
| At3g45300 isovaleryl-CoA-dehydrogenase precursor (IVD)                   | Cellular metabolism-related protein     |
| At5g18170 glutamate dehydrogenase (EC 1.4.1.-) 1 (pir:IS71217)           | Cellular metabolism-related protein     |
| At3g47340 glutamine-dependent asparagine synthetase                      | Cellular metabolism-related protein     |
| At5g54080 homogentisate 1,2-dioxygenase                                  | Cellular metabolism-related protein     |
| At3g06850 branched chain alpha-keto acid dehydrogenase E2 subunit        | Cellular metabolism-related protein     |
| At5g40850 uroporphyrin III methylase (gb)AAB92676.1)                     | Cellular metabolism-related protein     |
| At3g51000 epoxide hydrolase-like protein                                 | Cellular metabolism-related protein     |
| At1g17990 12-oxophytodienoate reductase, putative                        | Cellular metabolism-related protein     |
| At1g75270 dehydroascorbate reductase, putative                           | Cellular metabolism-related protein     |
| At5g05690 cytochrome p450, putative                                      | Cytochrome P450                         |
| At5g12250 tubulin beta-6 chain (spiP29514)                               | Cytoskeleton-related protein            |
| At2g29420 glutathione transferase, putative                              | Detoxification enzyme                   |
| At1g65970 type 2 peroxidase, putative                                    | Detoxification enzyme                   |
| At2g18980 peroxidase, putative   | Detoxification enzyme                   |
| At5g16370 AMP-binding protein  | DNA, nucleus                            |
| At1g23860 splicing factor SRZ, 21  | DNA, nucleus                            |
| At2g28630 beta-ketoacyl-CoA synthase family                              | Fatty acid metabolism-related protein   |
| At5g57900 SKP1 interacting partner 1 (SKIP1)                             | F-box protein                           |
| At2g14900 similar to gibberellin-regulated proteins                      | Gibberellin-regulated protein           |
| At1g74670 GAST1-like protein   | Gibberellin-regulated protein           |
| At5g15230 GAS4   | Gibberellin-regulated protein           |
| At2g19310 putative small heat shock protein                              | Heat shock protein                      |
| At1g06760 histone H1, putative   | Histone                                 |
| At2g18050 histone H1   | Histone                                 |
| At2g42690 putative lipase  | Lipase                                  |
| At2g18370 putative lipid transfer protein                                | Lipid transfer protein                  |
| At2g15050 putative lipid transfer protein                                | Lipid transfer protein                  |
| At3g16240 delta tonoplast integral protein (delta-TIP)                   | Membrane protein                        |
| At4g35100 plasma membrane intrinsic protein (SIMIP)                      | Membrane protein                        |
| At1g01620 plasma membrane intrinsic protein 1c, putative                 | Membrane protein                        |
| At3g61430 plasma membrane intrinsic protein 1a                           | Membrane protein                        |
| At3g30775 hypothetical protein   | Osmoprotectant-related protein          |
| At1g76100 plastocyanin   | Photosynthesis-related protein          |
| At3g29240 chloroplast lumen common protein family                        | Photosynthesis-related protein          |
| At3g08940 putative chlorophyll a/b-binding protein                       | Photosynthesis-related protein          |
| At1g51400 photosystem II 5 KD protein                                    | Photosynthesis-related protein          |
| At1g03130 putative photosystem I reaction center subunit II precursor    | Photosynthesis-related protein          |
| At1g52230 photosystem I subunit VI precursor                             | Photosynthesis-related protein          |
| At5g54270 light-harvesting chlorophyll a/b binding protein, putative     | Photosynthesis-related protein          |
| At4g02770 putative photosystem I reaction center subunit II precursor    | Photosynthesis-related protein          |
| At5g49730 FRO2-like protein; NADPH oxidase-like                          | Plant defense-related protein           |
| At3g12610 DNA-damage-repair/tolerance protein, putative (DRT100)         | Plant defense-related protein           |
| At4g35770 senescence-associated protein sen1                             | Senescence-related protein              |
| At5g44020 vegetative storage protein-like                                | Storage protein                         |
| At4g01460 bHLH protein   | Transcription factor                    |
| At3g04730 auxin-induced protein  | Transcription factor                    |
| At5g53980 unknown protein  | Transcription factor                    |
| At3g10040 unknown protein  | Transcription factor                    |
| At3g24500 ethylene-responsive transcriptional coactivator, putative      | Transcription factor                    |
| At1g73530 putative helix-loop-helix DNA-binding protein                  | Transcription factor                    |
| At1g19000 myb family transcription factor                                | Transcription factor                    |
| At5g65640 bHLH protein   | Transcription factor                    |
| At2g33810 putative squamosa-promoter binding protein                     | Transcription factor                    |
| At1g79700 ovule development protein, putative                            | Transcription factor                    |
| At3g26520 gamma tonoplast intrinsic protein                              | Transport protein, ion channel, carrier |
| At1g52190 peptide transporter, putative                                  | Transport protein, ion channel, carrier |
| At3g28860 multidrug resistance P-glycoprotein, putative                  | Transport protein, ion channel, carrier |
| At1g78000 high affinity sulphate transporter, putative                   | Transport protein, ion channel, carrier |
| At1g77720 sugar carrier protein, putative                                | Transport protein, ion channel, carrier |
| At5g64410 Isp4-like protein  | Transport protein, ion channel, carrier |
| At1g11260 glucose transporter  | Transport protein, ion channel, carrier |
| At2g21550 putative hydrolase   | Unknown                                 |
| At5g25280 serine-rich protein  | Unknown                                 |
| At2g05540 putative glycine-rich protein                                  | Unknown                                 |
| At1g33780 chloroplast lumen common protein family                        | Unknown                                 |
| At3g14210 myrosinase-associated protein, putative                        | Unknown                                 |
| At2g33740 putative related to microbial divalent cation tolerance protei | Unknown                                 |
| At5g19120 conglutin gamma - like protein                                 | Unknown                                 |
| At2g20670 expressed protein  | Unknown                                 |
| At5g22920 PGPD14 protein   | Unknown                                 |
| At5g19190 putative protein   | Unknown                                 |
| At4g32480 putative protein   | Unknown                                 |
| At5g48680 putative protein   | Unknown                                 |
| At3g7440 unknown protein   | Unknown                                 |
| At5g47830 unknown protein  | Unknown                                 |
| At2g34620 hypothetical protein   | Unknown                                 |
| At4g17870 putative protein   | Unknown                                 |
| At3g29370 Expressed protein  | Unknown                                 |
| At5g67420 putative protein   | Unknown                                 |
| At3g26510 unknown protein  | Unknown                                 |
| At2g44130 expressed protein  | Unknown                                 |
| At1g72430 expressed protein  | Unknown                                 |
| At4g28270 putative protein   | Unknown                                 |
| At5g03230 putative protein   | Unknown                                 |
| At4g10270 probable wound-induced protein                                 | Unknown                                 |
| At3g1210 putative protein  | Unknown                                 |
| At5g3890 putative protein  | Unknown                                 |
| At2g16060 class 1 non-symbiotic hemoglobin (AHB1)                        | Unknown                                 |
| At3g03270 expressed protein  | Unknown                                 |
| At1g62480 expressed protein  | Unknown                                 |
| At5g10050 putative protein   | Unknown                                 |
| At5g62930 putative protein   | Unknown                                 |
| At1g25230 hypothetical protein   | Unknown                                 |
| At1g43800 Expressed protein  | Unknown                                 |
| At5g66590 putative protein   | Unknown                                 |
| At3g29970 gene_idK17E7.15 unknown protein                                | Unknown                                 |
| At4g27450 putative protein   | Unknown                                 |
| At2g39570 expressed protein  | Unknown                                 |
| At1g90920 J8-like protein  | Unknown                                 |
| At4g14930 expressed protein  | Unknown                                 |
| At1g55360 unknown protein  | Unknown                                 |
| At3g50750 putative protein   | Unknown                                 |
| At3g28050 expressed protein  | Unknown                                 |
| At1g28400 hypothetical protein   | Unknown                                 |
| At5g52780 putative protein   | Unknown                                 |
| At5g60840 putative protein   | Unknown                                 |
| At3g27020 expressed protein  | Unknown                                 |
| At5g26280 putative protein   | Unknown                                 |
| At5g39530 putative protein   | Unknown                                 |
| At1g09750 expressed protein  | Unknown                                 |
| At5g16030 putative protein with poly glutamic acid stretch               | Unknown                                 |
| At3g2080 expressed protein   | Unknown                                 |
| At4g14870 expressed protein  | Unknown                                 |
| At1g21500 expressed protein  | Unknown                                 |
| At1g72030 unknown protein  | Unknown                                 |
| At1g04770 hypothetical protein   | Unknown                                 |
| At5g48850 putative protein   | Unknown                                 |
| At5g15500 putative protein   | Unknown                                 |
| At4g15760 monooxygenase 1 (MO1), putative                                | Unknown                                 |
| At4g19160 putative protein   | Unknown                                 |
| At5g21170 AKIN beta1   | Unknown                                 |
| At4g24230 putative protein   | Unknown                                 |
| At3g5440 putative protein  | Unknown                                 |
| At4g35750 putative protein   | Unknown                                 |
| At5g63190 topoisomerase, putative  | Unknown                                 |
| At5g53160 putative protein   | Unknown                                 |
| At5g40450 putative protein   | Unknown                                 |
| At3g10980 unknown protein  | Unknown                                 |
| At1g19530 expressed protein  | Unknown                                 |
| At5g59080 putative protein   | Unknown                                 |

**C group**

|  |                         |
|--|-------------------------|
| At5g18010 auxin-induced protein (SAUR), putative | Auxin-regulated protein |
| At5g18060 auxin-induced protein-like             | Auxin-regulated protein |
| At5g18050 auxin-induced protein-like             | Auxin-regulated protein |
| At5g18030 auxin-induced protein-like             | Auxin-regulated protein |
| At1g29500 auxin-induced protein, putative        | Auxin-regulated protein |
| At1g29440 auxin-induced protein, putative        | Auxin-regulated protein |

|           |  |   |
|-----------|--|---|
| At1g23740 | putative auxin-induced protein                               | Auxin-regulated protein                 |
| At2g31790 | UDP-glycosyltransferase family                               | Carbohydrate metabolism-related protein |
| At2g28950 | expansin, putative   | Cell wall-related protein               |
| At1g67750 | polysaccharide lyase family 1 (pectate lyase)                | Cell wall-related protein               |
| At4g37800 | xyloglucan endotransglycosylase, putative                    | Cell wall-related protein               |
| At1g69530 | expansin (At-EXP1)   | Cell wall-related protein               |
| At4g24780 | polysaccharide lyase family 1 (pectate lyase)                | Cell wall-related protein               |
| At4g19170 | 9-cis-epoxycarotenoid dioxygenase (NCED1), putative          | Cellular metabolism-related protein     |
| At1g23310 | putative alanine aminotransferase                            | Cellular metabolism-related protein     |
| At1g53520 | chalcone-flavanone isomerase-related                         | Cellular metabolism-related protein     |
| At5g56300 | glutamate-ammonia ligase (EC 6.3.1.2) precursor, chloroplast | Cellular metabolism-related protein     |
| At4g39940 | adenosine-5-phosphosulfate-kinase                            | Cellular metabolism-related protein     |
| At5g21100 | L-ascorbate oxidase, putative                                | Cellular metabolism-related protein     |
| At1g18590 | flavonol 4-sulfotransferase, putative                        | Cellular metabolism-related protein     |
| At2g14750 | putative adenosine phosphosulfate kinase                     | Cellular metabolism-related protein     |
| At3g02020 | putative aspartate kinase                                    | Cellular metabolism-related protein     |
| At5g14200 | 3-isopropylmalate dehydrogenase                              | Cellular metabolism-related protein     |
| At1g45214 | similar to putative lectin, 5 partial                        | Cellular metabolism-related protein     |
| At3g58990 | 3-isopropylmalate dehydratase-like protein (small subunit)   | Cellular metabolism-related protein     |
| At4g37980 | cinnamyl-alcohol dehydrogenase ELI3-1                        | Cellular metabolism-related protein     |
| At1g24100 | UDP-glycosyltransferase family                               | Cellular metabolism-related protein     |
| At1g48600 | phosphoethanolamine N-methyltransferase, putative            | Cellular metabolism-related protein     |
| At1g68010 | hydroxypyruvate reductase (HPR)                              | Cellular metabolism-related protein     |
| At1g32100 | pinonesinol-lariciresinol reductase, putative                | Cellular metabolism-related protein     |
| At2g29310 | putative tropinone reductase                                 | Cellular metabolism-related protein     |
| At5g07460 | peptide methionine sulfoxide reductase-like protein          | Cellular metabolism-related protein     |
| At2g34490 | cytochrome p450 family                                       | Cytochrome P450                         |
| At4g13770 | cytochrome p450 family                                       | Cytochrome P450                         |
| At4g39510 | cytochrome p450 family                                       | Cytochrome P450                         |
| At4g35090 | catalase 2   | Detoxification enzyme                   |
| At1g09140 | zarginine/serine-rich splicing factor, atSRp30               | DNA, nucleus                            |
| At1g04350 | putative 1-aminocyclopropane-1-carboxylate oxidase           | Ethylene biosynthesis                   |
| At1g06080 | delta 9 desaturase (ADS1)                                    | Fatty acid metabolism-related protein   |
| At1g54040 | jasmonate inducible protein, putative                        | JA-regulated protein                    |
| At5g5670  | GDSL-motif lipase/hydrolase-like protein                     | Lipase                                  |
| At5g14740 | CARBONIC ANHYDRASE 2   | Photosynthesis-related protein          |
| At1g10960 | ferredoxin precursor isolog                                  | Photosynthesis-related protein          |
| At5g38420 | ribulose biphosphate carboxylase small chain 2b precursor    | Photosynthesis-related protein          |
| At5g38410 | ribulose biphosphate carboxylase small chain 3b precursor    | Photosynthesis-related protein          |
| At3g50820 | photosystem II oxygen-evolving complex 33 (OEC33)            | Photosynthesis-related protein          |
| At4g21280 | oxygen-evolving complex protein 16, chloroplast precursor    | Photosynthesis-related protein          |
| At1g30380 | photosystem I subunit X precursor                            | Photosynthesis-related protein          |
| At3g27690 | light harvesting chlorophyll A/B binding protein, putative   | Photosynthesis-related protein          |
| At3g16250 | putative 2Fe-2S iron-sulfur cluster protein                  | Photosynthesis-related protein          |
| At1g19150 | light-harvesting chlorophyll a/b binding protein             | Photosynthesis-related protein          |
| At1g32060 | phosphoribulokinase precursor                                | Photosynthesis-related protein          |
| At1g16080 | chloroplast drought-induced stress protein, putative         | Photosynthesis-related protein          |
| At3g01500 | carbonic anhydrase, chloroplast precursor                    | Photosynthesis-related protein          |
| At3g52720 | carbonic anhydrase (CAH1)                                    | Photosynthesis-related protein          |
| At2g38870 | putative protease inhibitor                                  | Protease inhibitor                      |
| At4g21650 | subtilisin proteinase - like                                 | Proteolytic degradation                 |
| At4g35350 | cysteine protease XCP1                                       | Proteolytic degradation                 |
| At2g41090 | calcium binding protein (CaBP-22)                            | Signaling                               |
| At5g24780 | vegetative storage protein Vsp1                              | Storage protein                         |
| At1g32640 | bHLH protein (RAP-1)   | Transcription factor                    |
| At5g60890 | receptor-like protein kinase(ATR1), putative                 | Transcription factor                    |
| At1g73870 | CONSTANS B-box zinc finger family protein                    | Transcription factor                    |
| At4g09650 | H+-transporting ATP synthase-like protein                    | Transport protein, ion channel, carrier |
| At4g17340 | membrane channel like protein                                | Transport protein, ion channel, carrier |
| At5g10180 | sulfate transporter  | Transport protein, ion channel, carrier |
| At4g22200 | potassium channel protein AKT3                               | Transport protein, ion channel, carrier |
| At1g14700 | purple acid phosphatase, putative                            | Unknown                                 |
| At3g16530 | putative lectin  | Unknown                                 |
| At1g54010 | myrosinase-associated protein, putative                      | Unknown                                 |
| At2g39310 | putative myrosinase-binding protein                          | Unknown                                 |
| At3g09260 | glycosyl hydrolase family 1                                  | Unknown                                 |
| At1g52000 | myrosinase binding protein, putative                         | Unknown                                 |
| At4g33560 | putative protein   | Unknown                                 |
| At3g47560 | putative protein   | Unknown                                 |
| At3g26450 | major latex protein (MLP)-related                            | Unknown                                 |
| At4g23680 | major latex protein (MLP)-related                            | Unknown                                 |
| At4g18970 | Expressed protein  | Unknown                                 |
| At2g33560 | FKBP-type peptidyl-prolyl cis-trans isomerase                | Unknown                                 |
| At3g46780 | putative protein   | Unknown                                 |
| At1g20340 | plastocyanin   | Unknown                                 |
| At1g33811 | unknown protein  | Unknown                                 |
| At2g42220 | rhodanese-like domain protein                                | Unknown                                 |
| At4g23670 | major latex protein (MLP)-related                            | Unknown                                 |
| At4g12880 | blue copper-binding protein, 15K (lamin)                     | Unknown                                 |
| At3g01680 | unknown protein  | Unknown                                 |
| At3g54260 | putative protein   | Unknown                                 |
| At3g19800 | expressed protein  | Unknown                                 |
| At4g00780 | coded for by A. thaliana cDNA T20615                         | Unknown                                 |
| At3g36120 | unknown protein  | Unknown                                 |
| At1g39310 | expressed protein  | Unknown                                 |
| At2g36950 | expressed protein  | Unknown                                 |
| At2g03550 | putative esterase  | Unknown                                 |
| At4g30530 | putative protein   | Unknown                                 |
| At5g38980 | putative protein   | Unknown                                 |
| At5g22580 | expressed protein  | Unknown                                 |
| At1g73330 | Dr4(protease inhibitor)                                      | Unknown                                 |
| At2g32870 | unknown protein  | Unknown                                 |
| At2g01520 | major latex protein (MLP)-related                            | Unknown                                 |
| At5g26260 | putative protein   | Unknown                                 |
| At1g19670 | expressed protein  | Unknown                                 |
| At1g61220 | putative protein   | Unknown                                 |
| At2g37170 | aquaporin (plasma membrane intrinsic protein 2B)             | Water channel protein                   |
| At2g36830 | putative aquaporin (tonoplast intrinsic protein gamma)       | Water channel protein                   |

## D group

|           |   |   |
|-----------|---|---|
| At1g32900 | starch synthase, putative                   | Carbohydrate metabolism-related protein |
| At5g18670 | glycosyl hydrolase family 14 (beta-amylase) | Cellular metabolism-related protein     |
| At1g55960 | membrane related protein CP5, putative      | Membrane protein                        |
| At5g13170 | senescence-associated protein (SAG29)       | Senescence-related protein              |
| At3g57040 | responce reactor 4                          | Signaling                               |
| At5g51990 | DRE binding protein                         | Transcription factor                    |
| At2g38470 | WRKY family transcription factor            | Transcription factor                    |
| At1g69490 | expressed protein                           | Transcription factor                    |
| At5g47370 | homeobox-leucine zipper protein-like        | Transcription factor                    |
| At3g55980 | putative protein                            | Transcription factor                    |
| At4g24570 | mitochondrial carrier protein family        | Transport protein,ion channel, carrier  |
| At2g41250 | hypothetical protein                        | Unknown                                 |
| At1g23710 | expressed protein                           | Unknown                                 |
| At1g16740 | expressed protein                           | Unknown                                 |
| At3g4640  | expressed protein                           | Unknown                                 |
| At4g34150 | putative protein                            | Unknown                                 |
| At1g66160 | expressed protein                           | Unknown                                 |
| At5g16200 | putative protein                            | Unknown                                 |
| At2g41010 | unknown protein                             | Unknown                                 |
| At1g68440 | expressed protein                           | Unknown                                 |
| At5g11070 | putative protein                            | Unknown                                 |
| At1g73540 | unknown protein                             | Unknown                                 |
| At1g76600 | expressed protein                           | Unknown                                 |
| At5g66580 | putative protein                            | Unknown                                 |

## E group

|           |  |   |
|-----------|--|---|
| At4g24960 | abscisic acid-induced - like protein                                 | ABA-regulated protein                   |
| At5g13200 | ABA-responsive protein - like  | ABA-regulated protein                   |
| At1g77120 | alcohol dehydrogenase  | Alcohol dehydrogenase                   |
| At4g03400 | putative GH3-like protein  | Auxin regulated protein                 |
| At3g29360 | UDP-glucose dehydrogenase, putative                                  | Carbohydrate metabolism-related protein |
| At4g10960 | UDP-galactose 4-epimerase - like protein                             | Carbohydrate metabolism-related protein |
| At4g53070 | pyruvate decarboxylase-1 (Pdc1)                                      | Carbohydrate metabolism-related protein |
| At4g34131 | similar to glycosyltransferase - like protein                        | Carbohydrate metabolism-related protein |
| At5g11110 | sucrose-phosphate synthase -like protein                             | Carbohydrate metabolism-related protein |
| At3g21560 | UDP-glycosyltransferase, putative                                    | Carbohydrate metabolism-related protein |
| At5g17050 | glycosyltransferase family   | Carbohydrate metabolism-related protein |
| At5g20830 | sucrose synthase(sucrose-UDP glycosyltransferase), putative          | Carbohydrate metabolism-related protein |
| At4g17090 | glycosyl hydrolase family 14 (beta-amylase)                          | Carbohydrate metabolism-related protein |
| At1g02460 | polygalacturonase, putative  | Cell wall-related protein               |
| At1g48100 | polygalacturonase, putative  | Cell wall-related protein               |
| At1g76160 | pectinesterase (pectin methyltransferase), putative                  | Cell wall-related protein               |
| At3g45970 | putative protein   | Cell wall-related protein               |
| At3g49220 | pectinesterase - like protein  | Cell wall-related protein               |
| At5g48070 | xyloglucan endotransglycosylase, putative                            | Cell wall-related protein               |
| At5g23680 | DC1.2 homologue - like protein                                       | Cell wall-related protein               |
| At1g06000 | glycosyltransferase family   | Cellular metabolism-related protein     |
| At3g51240 | flavanone 3-hydroxylase (F3H)  | Cellular metabolism-related protein     |
| At4g27830 | glycosyl hydrolase family 1  | Cellular metabolism-related protein     |
| At5g08640 | flavonol synthase 1 (FLS1)   | Cellular metabolism-related protein     |
| At1g09780 | putative 2,3-bisphosphoglycerate-independent phosphoglycerate kinase | Cellular metabolism-related protein     |
| At1g17050 | geranyl diphosphate synthase (GPPS),putative                         | Cellular metabolism-related protein     |
| At2g16500 | arginine decarboxylase   | Cellular metabolism-related protein     |
| At3g23820 | NAD dependent epimerase, putative                                    | Cellular metabolism-related protein     |
| At3g53260 | phenylalanine ammonia-lyase  | Cellular metabolism-related protein     |
| At3g57010 | stricoidine synthase-related   | Cellular metabolism-related protein     |
| At3g7020  | stricoidine synthase-related   | Cellular metabolism-related protein     |
| At4g23600 | tyrosine transaminase like protein                                   | Cellular metabolism-related protein     |
| At4g27560 | glycosyltransferase family   | Cellular metabolism-related protein     |
| At5g19300 | chalcone synthase (naringenin-chalcone synthase)                     | Cellular metabolism-related protein     |
| At5g55180 | glycosyl hydrolase family 17   | Cellular metabolism-related protein     |
| At1g05680 | putative indole-3-acetate beta-glycosyltransferase                   | Cellular metabolism-related protein     |
| At2g03760 | putative steroid sulfotransferase                                    | Cellular metabolism-related protein     |
| At1g62570 | flavin-containing monooxygenase, putative                            | Cellular metabolism-related protein     |
| At4g39800 | myo-inositol-1-phosphate synthase                                    | Cellular metabolism-related protein     |
| At4g37320 | cytochrome p450 family   | Cytochrome P450                         |
| At2g16700 | actin depolymerizing factor 5  | Cytoskeleton-related protein            |
| At4g20890 | tubulin beta-9 chain   | Cytoskeleton-related protein            |
| At1g10370 | glutathione transferase, putative                                    | Detoxification enzyme                   |
| At1g17170 | glutathione transferase, putative                                    | Detoxification enzyme                   |
| At1g17180 | glutathione transferase, putative                                    | Detoxification enzyme                   |
| At1g02930 | glutathione transferase, putative                                    | Detoxification enzyme                   |
| At3g07050 | putative GTPase  | DNA, nucleus                            |
| At3g12670 | CTP-synthetase, putative   | DNA, nucleus                            |
| At3g14890 | DNA nick sensor, putative  | DNA, nucleus                            |
| At3g54400 | nucleoid DNA-binding - like protein                                  | DNA, nucleus                            |
| At3g55580 | regulator of chromosome condensation-like protein                    | DNA, nucleus                            |
| At4g25630 | fibrillarin 2 (AIFB2)  | DNA, nucleus                            |
| At5g08620 | DEAD/DEAH box RNA helicase, putative                                 | DNA, nucleus                            |
| At2g31360 | delta 9 desaturase (ADS2)  | Fatty acid metabolism-related protein   |
| At3g51580 | delta-8 sphingolipid desaturase (SLD1)                               | Fatty acid metabolism-related protein   |
| At1g12710 | hypothetical protein   | F-box protein                           |
| At1g68050 | F-box protein FKF1/ADO3, AIFBX2a                                     | F-box protein                           |
| At3g61060 | putative protein   | F-box protein                           |
| At2g04030 | putative heat shock protein  | Heat shock protein                      |
| At3g09440 | heat-shock protein (At-hsc70-3)                                      | Heat shock protein                      |
| At5g49910 | heat shock protein 70 (gb/AAF27638.1)                                | Heat shock protein                      |
| At5g52300 | low-temperature-induced 65 kD protein (sp/Q04980)                    | Hydrophilic protein (unknown function)  |
| At5g52310 | low-temperature-induced protein 78 (sp/Q06738)                       | Hydrophilic protein (unknown function)  |
| At1g20440 | hypothetical protein   | LEA protein                             |
| At1g20450 | expressed protein  | LEA protein                             |
| At1g76180 | dehydrin, putative   | LEA protein                             |
| At4g02380 | late embryogenesis abundant protein-related                          | LEA protein                             |





|           |                         |                            |
|-----------|-------------------------|----------------------------|
| At4g27720 | putative protein        | Unknown                    |
| At4g30350 | putative protein        | Unknown                    |
| At4g32190 | putative protein        | Unknown                    |
| At4g33980 | putative protein        | Unknown                    |
| At4g34120 | putative protein        | Unknown                    |
| At4g34950 | putative protein        | Unknown                    |
| At4g36500 | putative protein        | Unknown                    |
| At5g10410 | putative protein        | Unknown                    |
| At5g11890 | putative protein        | Unknown                    |
| At5g17760 | BCS1 - like protein     | Unknown                    |
| At5g24570 | expressed protein       | Unknown                    |
| At5g26770 | putative protein        | Unknown                    |
| At5g42570 | expressed protein       | Unknown                    |
| At5g43630 | unknown protein         | Unknown                    |
| At5g46710 | putative protein        | Unknown                    |
| At5g47650 | MuT domain protein-like | Unknown                    |
| At5g51180 | putative protein        | Unknown                    |
| At5g59730 | putative protein        | Unknown                    |
| At5g62900 | putative protein        | Unknown                    |
| At5g64260 | phi-1-like protein      | Unknown                    |
| At5g65000 | putative protein        | Unknown                    |
| At5g65300 | expressed protein       | Unknown                    |
| At5g7480  | putative protein        | Unknown                    |
| At5g7620  | unknown protein         | Unknown                    |
| At1g62710 | beta-VPE                | Vacuolar processing enzyme |

## F group

|           |   |   |
|-----------|---|---|
| At3g23810 | S-adenosyl-L-homocysteinase, putative                     | Cellular metabolism-related protein     |
| At5g16010 | steroid 5alpha-reductase-like protein                     | Cellular metabolism-related protein     |
| At5g8430  | ribulose biphosphate carboxylase small chain 1b precursor | Photosynthesis-related protein          |
| At1g51805 | receptor protein kinase, putative                         | Protein kinase                          |
| At5g44530 | subtilisin-like serine protease                           | Proteolytic degradation                 |
| At2g33380 | RD20 protein  | Signaling                               |
| At4g25480 | DRE binding protein (DREB1A)                              | Transcription factor                    |
| At4g25470 | DRE binding protein (DREB1C)                              | Transcription factor                    |
| At5g54470 | CONSTANS B-box zinc finger family protein                 | Transcription factor                    |
| At3g47500 | Dof zinc finger protein                                   | Transcription factor                    |
| At4g27310 | CONSTANS B-box zinc finger family protein                 | Transcription factor                    |
| At5g05410 | DRE binding protein (DREB2A)                              | Transcription factor                    |
| At3g51895 | sulfate transporter ATST1                                 | Transport protein, ion channel, carrier |
| At1g70420 | expressed protein   | Unknown                                 |
| At3g4140  | unknown protein   | Unknown                                 |
| At3g12320 | expressed protein   | Unknown                                 |
| At1g69160 | expressed protein   | Unknown                                 |
| At5g20790 | putative protein  | Unknown                                 |
| At5g64770 | unknown protein   | Unknown                                 |
| At5g64170 | putative protein  | Unknown                                 |
| At3g17800 | expressed protein   | Unknown                                 |
| At1g07180 | expressed protein   | Unknown                                 |
| At3g28220 | unknown protein   | Unknown                                 |

## G group

|           |  |   |
|-----------|--|---|
| At2g33830 | auxin-regulated protein                                    | Auxin-regulated protein                 |
| At3g46970 | starch phosphorylase, putative                             | Carbohydrate metabolism-related protein |
| At5g62350 | ripening-related protein - like                            | Cell wall-related protein               |
| At3g03640 | glycosyl hydrolase family 1                                | Cellular metabolism-related protein     |
| At2g43620 | glycosyl hydrolase family 19 (chitinase)                   | Cellular metabolism-related protein     |
| At4g19810 | glycosyl hydrolase family 18                               | Cellular metabolism-related protein     |
| At2g43590 | glycosyl hydrolase family 19 (chitinase)                   | Cellular metabolism-related protein     |
| At3g13610 | 2-oxoglutarate-dependent dioxygenase family                | Cellular metabolism-related protein     |
| At5g08380 | glycosyl hydrolase family 27                               | Cellular metabolism-related protein     |
| At5g63810 | glycosyl hydrolase family 35 (beta-galactosidase)          | Cellular metabolism-related protein     |
| At1g79440 | succinic semialdehyde dehydrogenase (gabD), putative       | Cellular metabolism-related protein     |
| At1g69830 | putative alpha-amylase                                     | Cellular metabolism-related protein     |
| At2g02930 | glutathione transferase, putative                          | Detoxification enzyme                   |
| At3g51600 | non-specific lipid transfer protein                        | Lipid transfer protein                  |
| At5g66400 | dehydrin RAB18-like protein (sp P30185)                    | Plant defense-related protein           |
| At2g02120 | plant defensin protein, putative (PDF2.1)                  | Plant defense-related protein           |
| At1g75040 | thaumatin-like protein                                     | Plant defense-related protein           |
| At3g55450 | serine/threonine-specific protein kinase - like            | Protein kinase                          |
| At3g61160 | shaggy-like kinase beta                                    | Protein kinase                          |
| At1g43890 | GTP-binding protein(RAB1Y), putative                       | Signaling                               |
| At4g15653 | similar to chloroplast nucleoid DNA-binding protein-like   | Signaling                               |
| At5g61380 | pseudo-response regulator 1                                | Transcription factor                    |
| At5g40780 | amino acid permease  | Transport protein, ion channel, carrier |
| At2g38290 | putative ammonium transporter                              | Transport protein, ion channel, carrier |
| At5g37500 | stelar K+ outward rectifying channel (SKOR) - like protein | Transport protein, ion channel, carrier |
| At1g66700 | methyltransferase-related                                  | Unknown                                 |
| At4g20070 | hyuC-like protein  | Unknown                                 |
| At1g13930 | expressed protein  | Unknown                                 |
| At1g56300 | DnaJ protein, putative                                     | Unknown                                 |
| At3g62150 | multidrug resistance P-glycoprotein, putative              | Unknown                                 |
| At5g16040 | UVB-resistance protein-like                                | Unknown                                 |
| At4g15910 | drought-induced protein (Dl21)                             | Unknown                                 |
| At1g22770 | putative gigantha protein                                  | Unknown                                 |
| At4g12470 | pEARLI 1-like protein                                      | Unknown                                 |
| At2g21620 | auxin-regulated protein(RD2)                               | Unknown                                 |
| At2g42540 | cold-regulated protein cor15a precursor                    | Unknown                                 |
| At5g42900 | putative protein   | Unknown                                 |
| At3g59820 | putative protein   | Unknown                                 |
| At5g51570 | putative protein   | Unknown                                 |
| At1g27020 | unknown protein  | Unknown                                 |
| At2g15220 | expressed protein  | Unknown                                 |
| At2g05380 | expressed protein  | Unknown                                 |
| At1g76930 | expressed protein  | Unknown                                 |
| At4g12500 | pEARLI 1-like protein                                      | Unknown                                 |
| At3g12490 | cysteine proteinase inhibitor, putative                    | Unknown                                 |
| At1g12440 | hypothetical protein                                       | Unknown                                 |
| At5g39180 | germin-like protein  | Unknown                                 |
| At1g29395 | Expressed protein  | Unknown                                 |
| At5g23575 | Expressed protein  | Unknown                                 |
| At4g04330 | expressed protein  | Unknown                                 |
| At4g14230 | hypothetical protein                                       | Unknown                                 |
| At4g16146 | Expressed protein  | Unknown                                 |

## H group

|           |   |   |
|-----------|---|---|
| At2g22980 | putative serine carboxypeptidase I                        | Cellular metabolism-related protein     |
| At3g29320 | glucan phosphorylase, putative                            | Carbohydrate metabolism-related protein |
| At3g18080 | glycosyl hydrolase family 1                               | Carbohydrate metabolism-related protein |
| At4g26530 | fructose-bisphosphate aldolase - like protein             | Carbohydrate metabolism-related protein |
| At5g64860 | glycosyl hydrolase family 77                              | Cellular metabolism-related protein     |
| At5g50950 | fumarate hydratase  | Cellular metabolism-related protein     |
| At2g44460 | glycosyl hydrolase family 1                               | Cellular metabolism-related protein     |
| At2g40840 | glycosyl hydrolase family 77                              | Cellular metabolism-related protein     |
| At5g79400 | quinone oxidoreductase -like protein                      | Cellular metabolism-related protein     |
| At4g39220 | isoflavone reductase, putative                            | Cellular metabolism-related protein     |
| At1g19540 | isoflavone reductase homolog P3, putative                 | Cellular metabolism-related protein     |
| At1g75280 | isoflavone reductase homolog P3                           | Cellular metabolism-related protein     |
| At5g43440 | 1-aminocyclopropane-1-carboxylate oxidase                 | Ethylene biosynthesis                   |
| At1g64720 | membrane related protein CP5, putative                    | Membrane protein                        |
| At2g34430 | photosystem II type I chlorophyll a/b binding protein     | Photosynthesis-related protein          |
| At1g15820 | chlorophyll binding protein, putative                     | Photosynthesis-related protein          |
| At3g61470 | light-harvesting chlorophyll a/b binding protein          | Photosynthesis-related protein          |
| At4g05180 | oxygen-evolving complex protein 16, chloroplast precursor | Photosynthesis-related protein          |
| At1g61520 | light-harvesting chlorophyll a/b binding protein          | Photosynthesis-related protein          |
| At4g26750 | photosystem I subunit PSI-E - like protein                | Photosynthesis-related protein          |
| At5g40400 | photosystem I reaction center subunit PSI-N precursor     | Photosynthesis-related protein          |
| At4g10340 | light-harvesting chlorophyll a/b binding protein          | Photosynthesis-related protein          |
| At1g06680 | photosystem II oxygen-evolving complex 23 (OEC23)         | Photosynthesis-related protein          |
| At2g05100 | light-harvesting chlorophyll a/b binding protein          | Photosynthesis-related protein          |
| At2g05070 | light-harvesting chlorophyll a/b binding protein          | Photosynthesis-related protein          |
| At5g06690 | thioredoxin-like  | Photosynthesis-related protein          |
| At4g27440 | protochlorophyllide reductase precursor                   | Photosynthesis-related protein          |
| At1g75380 | wound-responsive protein, putative                        | Plant defense-related protein           |
| At2g43530 | putative trypsin inhibitor                                | Protease inhibitor                      |
| At5g66880 | protein kinase, 41K (EC 2.7.1.-) (piriS71172)             | Protein kinase                          |
| At2g23030 | putative protein kinase                                   | Protein kinase                          |
| At1g63800 | E2, ubiquitin-conjugating enzyme 5 (UBC5)                 | Proteolytic degradation                 |
| At4g33480 | nucellin -like protein                                    | Proteolytic degradation                 |
| At2g22990 | putative serine carboxypeptidase I                        | Proteolytic degradation                 |
| At4g39090 | cysteine proteinase RD19A                                 | Proteolytic degradation                 |
| At3g47160 | RNA-binding protein-like protein                          | RNA-binding protein                     |
| At5g24770 | vegetative storage protein Vsp2                           | Storage protein                         |
| At2g43010 | expressed protein   | Transcription factor                    |
| At5g02810 | putative protein  | Transcription factor                    |
| At5g46110 | phosphate/triose-phosphate translocator precursor         | Transport protein, ion channel, carrier |
| At3g26740 | light regulated protein, putative                         | Unknown                                 |
| At4g30660 | stress responsive protein homolog                         | Unknown                                 |
| At4g15540 | hypothetical protein                                      | Unknown                                 |
| At4g30690 | putative protein  | Unknown                                 |
| At4g14270 | Expressed protein   | Unknown                                 |
| At5g2160  | putative protein  | Unknown                                 |
| At1g20620 | catalase 3  | Unknown                                 |
| At5g47240 | mutT domain protein-like                                  | Unknown                                 |
| At5g42530 | unknown protein   | Unknown                                 |
| At1g52410 | myosin-like protein                                       | Unknown                                 |
| At3g55240 | putative protein  | Unknown                                 |
| At2g31040 | expressed protein   | Unknown                                 |
| At2g06520 | expressed protein   | Unknown                                 |
| At1g52220 | expressed protein   | Unknown                                 |
| At2g46820 | expressed protein   | Unknown                                 |
| At1g08380 | expressed protein   | Unknown                                 |
| At4g09010 | ascorbate peroxidase, putative                            | Unknown                                 |
| At3g52160 | putative protein  | Unknown                                 |
| At3g53800 | putative protein  | Unknown                                 |
| At5g27280 | putative protein  | Unknown                                 |
| At3g01310 | unknown protein   | Unknown                                 |
| At2g15960 | expressed protein   | Unknown                                 |

## I group

|           |   |   |
|-----------|---|---|
| At1g70820 | phosphoglucosylase, putative                            | Carbohydrate metabolism-related protein |
| At1g52400 | glycosyl hydrolase family 1, beta-glucosidase (BG1)     | Carbohydrate metabolism-related protein |
| At4g37930 | glycine hydroxymethyltransferase like protein           | Cellular metabolism-related protein     |
| At3g45140 | lipoygenase AtLOX2                                      | Cellular metabolism-related protein     |
| At4g18440 | adenylosuccinate lyase - like protein                   | Cellular metabolism-related protein     |
| At1g20020 | ferredoxin-NADP reductase precursor, putative           | Cellular metabolism-related protein     |
| At4g37410 | cytochrome p450, putative                               | Cytochrome P450                         |
| At1g22690 | putative gibberellin-regulated protein                  | Gibberellin-regulated protein           |
| At5g16400 | thioredoxin f2 (gblAAD35004.1)                          | Photosynthesis-related protein          |
| At1g43670 | fructose 1,6-bisphosphatase, putative                   | Photosynthesis-related protein          |
| At4g32660 | glycine-rich RNA-binding protein 8 (GRP8)               | RNA-binding protein                     |
| At1g1030  | myb family transcription factor                         | Transcription factor                    |
| At1g32080 | expressed protein                                       | Unknown                                 |
| At1g52510 | hypothetical protein                                    | Unknown                                 |
| At3g10060 | FKBP-type peptidyl-prolyl cis-trans isomerase, putative | Unknown                                 |
| At3g48420 | Expressed protein                                       | Unknown                                 |
| At1g54780 | thylakoid lumen 18.3 kDa protein                        | Unknown                                 |

<sup>11</sup>735 genes were clustered into the 9 groups(A-I) as described in Materials and Methods.



**Supplemental Table 6. Classification of the 735 genes<sup>1)</sup> responsive in the process of cold acclimation and deacclimation into the functional category groups.**

| Clustered Group (Supplemental Table 5)  | A         | B          | C          | D         | E          | F         | G         | H         | I         | Genes number in functional category |
|---|-----------|------------|------------|-----------|------------|-----------|-----------|-----------|-----------|-------------------------------------|
| Nucleic acids-related protein           | 0         | 4          | 1          | 0         | 7          | 0         | 0         | 0         | 0         | 12                                  |
| Protein kinase                          | 0         | 0          | 0          | 0         | 10         | 1         | 2         | 2         | 0         | 15                                  |
| Protein phosphatase                     | 1         | 0          | 0          | 0         | 0          | 0         | 0         | 0         | 0         | 1                                   |
| Signaling                               | 0         | 0          | 1          | 1         | 4          | 1         | 2         | 0         | 0         | 9                                   |
| Transcription factor                    | 1         | 10         | 3          | 5         | 36         | 6         | 1         | 2         | 1         | 65                                  |
| ABA-regulated protein                   | 0         | 0          | 0          | 0         | 2          | 0         | 0         | 0         | 0         | 2                                   |
| Alcohol dehydrogenase                   | 0         | 0          | 0          | 0         | 1          | 0         | 0         | 0         | 0         | 1                                   |
| Auxin-regulated protein                 | 0         | 2          | 7          | 0         | 1          | 0         | 1         | 0         | 0         | 11                                  |
| Carbohydrate metabolism-related protein | 0         | 14         | 1          | 1         | 9          | 0         | 1         | 3         | 2         | 30                                  |
| Cellular metabolism-related protein     | 1         | 18         | 19         | 1         | 19         | 2         | 9         | 9         | 4         | 83                                  |
| Cell wall-related protein               | 1         | 13         | 5          | 0         | 7          | 0         | 1         | 0         | 0         | 27                                  |
| Cytochrome P450                         | 0         | 1          | 3          | 0         | 1          | 0         | 0         | 0         | 1         | 6                                   |
| Cytoskeleton-related protein            | 0         | 1          | 0          | 0         | 2          | 0         | 0         | 0         | 0         | 3                                   |
| Detoxification enzyme                   | 0         | 3          | 1          | 0         | 4          | 0         | 1         | 0         | 0         | 9                                   |
| Ethylene biosynthesis                   | 0         | 0          | 1          | 0         | 0          | 0         | 0         | 1         | 0         | 2                                   |
| Fatty acid metabolism-related protein   | 0         | 1          | 1          | 0         | 2          | 0         | 0         | 0         | 0         | 4                                   |
| F-box protein                           | 0         | 1          | 0          | 0         | 3          | 0         | 0         | 0         | 0         | 4                                   |
| Gibberellin-regulated protein           | 0         | 3          | 0          | 0         | 0          | 0         | 0         | 0         | 1         | 4                                   |
| Heat shock protein                      | 1         | 1          | 0          | 0         | 3          | 0         | 0         | 0         | 0         | 5                                   |
| Hydrophilic protein (unknown function)  | 0         | 0          | 0          | 0         | 2          | 0         | 0         | 0         | 0         | 2                                   |
| JA-regulated protein                    | 0         | 0          | 1          | 0         | 0          | 0         | 0         | 0         | 0         | 1                                   |
| Kin protein                             | 0         | 0          | 0          | 0         | 0          | 0         | 0         | 0         | 0         | 0                                   |
| LEA protein                             | 0         | 0          | 0          | 0         | 4          | 0         | 0         | 0         | 0         | 4                                   |
| Lipase                                  | 0         | 1          | 1          | 0         | 2          | 0         | 0         | 0         | 0         | 4                                   |
| Lipid transfer protein                  | 0         | 2          | 0          | 0         | 0          | 0         | 1         | 0         | 0         | 3                                   |
| Membrane protein                        | 0         | 4          | 0          | 1         | 7          | 0         | 0         | 1         | 0         | 13                                  |
| Nitrogen metabolism                     | 0         | 0          | 0          | 0         | 0          | 0         | 0         | 0         | 0         | 0                                   |
| Osmoprotectant-related protein          | 0         | 1          | 0          | 0         | 8          | 0         | 0         | 0         | 0         | 9                                   |
| Photosynthesis-related protein          | 0         | 8          | 14         | 0         | 2          | 1         | 0         | 13        | 2         | 40                                  |
| Plant defense-related protein           | 0         | 2          | 0          | 0         | 5          | 0         | 3         | 1         | 0         | 11                                  |
| Pollen allergen homolog                 | 0         | 0          | 0          | 0         | 0          | 0         | 0         | 0         | 0         | 0                                   |
| Protease inhibitor                      | 0         | 0          | 1          | 0         | 2          | 0         | 0         | 1         | 0         | 4                                   |
| Proteolytic degradation                 | 0         | 0          | 2          | 0         | 0          | 1         |           | 4         | 0         | 7                                   |
| Reductases                              | 0         | 0          | 0          | 0         | 0          | 0         | 0         | 0         | 0         | 0                                   |
| Respiration-related protein             | 0         | 0          | 0          | 0         | 1          | 0         | 0         | 0         | 0         | 1                                   |
| Ribosomal protein                       | 0         | 0          | 0          | 0         | 3          | 0         | 0         | 0         | 0         | 3                                   |
| RNA-binding protein                     | 0         | 0          | 0          | 0         | 3          | 0         | 0         | 1         | 1         | 5                                   |
| Senescence-related protein              | 0         | 1          | 0          | 1         | 1          | 0         | 0         | 0         | 0         | 3                                   |
| Storage protein                         | 0         | 1          | 1          | 0         | 0          | 0         | 0         | 1         | 0         | 3                                   |
| Transport protein, ion channel, carrier | 0         | 7          | 4          | 1         | 13         | 1         | 3         | 1         | 0         | 30                                  |
| Vacuolar processing enzyme              | 0         | 0          | 0          | 0         | 1          | 0         | 0         | 0         | 0         | 1                                   |
| Water channel protein                   | 0         | 0          | 2          | 0         | 0          | 0         | 0         | 0         | 0         | 2                                   |
| Unknown                                 | 5         | 69         | 35         | 13        | 110        | 10        | 27        | 22        | 5         | 296                                 |
| <b>Genes number in clustered group</b>  | <b>10</b> | <b>168</b> | <b>104</b> | <b>24</b> | <b>275</b> | <b>23</b> | <b>52</b> | <b>62</b> | <b>17</b> | <b>735</b>                          |

<sup>1)</sup>735 genes were classified into the functional category groups. One gene (At4g36850: Unknown protein) could not be classified in to the 9 groups by the clustering.