**Supplemental Table 2.** Comparative accumulation of the chloroplast PG proteome of stressed (D, HL) and unstressed leaves (C) based on differential stable isotope labeling

| | High light/Control | | | | | | | | Dark/Control | | | | | | | | High light/Dark | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Biolog. Rep. 1 | | | Biolog. Rep. 2 | | | Average | | Biolog. Rep. 1 | | | Biolog. Rep. 2 | | | Average | | Biolog. Rep. 1 | | | Biolog. Rep. 2 | | | Average | |
| **Acc nr** | **ave** | **std** | **n** | **ave** | **std** | **n** | **ave** | **std** | **ave** | **std** | **n** | **ave** | **std** | **n** | **ave** | **std** | **ave** | **std** | **n** | **ave** | **std** | **n** | **ave** | **std** |
| At1g09340.1 | 0.211 | 0.033 | 3 | 0.089 | 0.065 | 3 | 0.150 | 0.087 | 0.190 | 0.076 | 4 | 1.073 | 0.200 | 3 | 0.632 | 0.624 | | | | 0.079 | 0.062 | 2 | 0.079 | |
| At1g15820.1 | 0.670 | 0.007 | 2 | 0.707 | 0.075 | 2 | 0.689 | 0.026 | 1.372 | 0.046 | 2 | 1.766 | 0.318 | 2 | 1.569 | 0.279 | 0.467 | 0.137 | 2 | 0.311 | 0.079 | 2 | 0.389 | 0.110 |
| At1g29910.1 [a] | 1.405 | 0.152 | 2 | 2.686 | 0.146 | 2 | 2.046 | 0.906 | 0.735 | 0.023 | 2 | 2.309 | 0.239 | 2 | 1.522 | 1.113 | 1.508 | 0.350 | 2 | 1.117 | 0.060 | 2 | 1.313 | 0.277 |
| At1g31330.1 | | | | 1.643 | 0.282 | 2 | 1.643 | | | | | 1.586 | 0.043 | 2 | 1.586 | | | | | 0.999 | 0.079 | 2 | 0.999 | |
| At1g32220.1 | 0.882 | 0.116 | 4 | 1.927 | 0.013 | 2 | 1.405 | 0.739 | 0.953 | 0.029 | 3 | 1.497 | 0.364 | 4 | 1.225 | 0.385 | | | | 1.009 | 0.065 | 3 | 1.009 | |
| At1g52230.1 [b] | 7.966 | 3.347 | 2 | 2.329 | 0.324 | 2 | 5.147 | 3.986 | 2.464 | 1.215 | 2 | 1.909 | 0.128 | 2 | 2.187 | 0.393 | 2.584 | 0.373 | 2 | 1.014 | 0.143 | 2 | 1.799 | 1.110 |
| At1g54570.1 | 3.229 | 0.539 | 6 | 9.285 | 6.513 | 4 | 6.257 | 4.282 | 1.468 | 0.756 | 6 | 1.535 | 0.710 | 2 | 1.502 | 0.047 | 2.185 | 0.957 | 6 | 8.817 | 6.449 | 6 | 5.501 | 4.690 |
| At1g71810.1 | 0.900 | 0.161 | 5 | | | | 0.900 | | 0.437 | 0.188 | 3 | | | | 0.437 | | 1.171 | 0.237 | 6 | | | | 1.171 | |
| At1g79600.1 | 1.517 | 0.129 | 2 | 1.331 | 0.343 | 7 | 1.424 | 0.131 | 0.652 | 0.211 | 2 | 0.812 | 0.251 | 6 | 0.732 | 0.113 | 1.584 | 0.275 | 7 | 1.186 | 0.197 | 5 | 1.385 | 0.282 |
| At2g20260.1 [c] | 6.129 | 0.657 | 2 | 2.876 | 0.256 | 2 | 4.503 | 2.301 | 1.967 | 0.439 | 2 | 2.406 | 1.316 | 2 | 2.186 | 0.310 | 1.962 | 1.118 | 2 | 1.195 | 0.293 | 2 | 1.579 | 0.542 |
| At2g21330.1 | 0.986 | 0.181 | 9 | 0.722 | 0.037 | 8 | 0.854 | 0.187 | 1.076 | 0.178 | 10 | 0.892 | 0.043 | 8 | 0.984 | 0.130 | 0.780 | 0.206 | 13 | 0.797 | 0.042 | 8 | 0.789 | 0.012 |
| At2g34460.1 | 0.832 | 0.088 | 3 | 0.758 | 0.061 | 4 | 0.795 | 0.052 | 0.990 | 0.135 | 2 | 1.152 | 0.126 | 3 | 1.071 | 0.114 | 0.606 | 0.121 | 3 | 0.586 | 0.074 | 2 | 0.596 | 0.014 |
| At2g35490.1 | 0.906 | 0.136 | 14 | 0.824 | 0.103 | | 0.865 | 0.058 | 0.998 | 0.144 | 15 | 1.259 | 0.317 | 14 | 1.129 | 0.185 | 0.685 | 0.105 | 16 | 0.667 | 0.102 | 12 | 0.676 | 0.013 |
| At2g41040.1 | 2.407 | 0.270 | 4 | 1.250 | 0.121 | 2 | 1.828 | 0.818 | 1.335 | 0.230 | 4 | 0.901 | 0.040 | 2 | 1.118 | 0.307 | 1.153 | 0.245 | 5 | 1.338 | 0.548 | 2 | 1.246 | 0.131 |
| At2g42130.3 | 1.315 | 0.104 | 5 | 1.482 | 0.169 | 8 | 1.399 | 0.118 | 2.437 | 0.320 | 6 | 3.659 | 0.635 | 8 | 3.048 | 0.864 | 0.347 | 0.096 | 8 | 0.404 | 0.050 | 8 | 0.376 | 0.040 |
| At2g46910.1 | 1.505 | 0.718 | 2 | 1.203 | 0.032 | 2 | 1.354 | 0.214 | | | | | | | | | 0.874 | 0.083 | 2 | 0.258 | 0.329 | 2 | 0.566 | 0.435 |
| At3g10130.1 | | | | 2.340 | 2.324 | 2 | 2.340 | | 0.642 | 0.235 | 2 | 1.107 | 1.068 | 2 | 0.874 | 0.329 | 1.245 | 0.280 | 2 | 2.184 | 2.079 | 2 | 1.714 | 0.664 |
| At3g23400.1 | 0.694 | 0.166 | 18 | 0.712 | 0.129 | 20 | 0.703 | 0.013 | 1.061 | 0.269 | 18 | 0.880 | 0.281 | 22 | 0.971 | 0.128 | 0.458 | 0.165 | 20 | 0.769 | 0.143 | 18 | 0.613 | 0.221 |
| At3g58010.1 | 1.200 | 0.222 | 6 | 0.644 | 0.145 | 5 | 0.922 | 0.393 | 1.738 | 0.261 | 6 | 1.106 | 0.086 | 6 | 1.422 | 0.447 | 0.424 | 0.124 | 9 | 0.577 | 0.129 | 8 | 0.500 | 0.108 |
| At4g01150.1 | 3.247 | 0.859 | 2 | 3.239 | 0.750 | 2 | 3.243 | 0.006 | | | | 1.688 | 0.441 | 2 | 1.688 | | | | | 2.407 | 0.036 | 2 | 2.407 | |
| At4g04020.1 | 1.254 | 0.243 | 15 | 1.661 | 0.188 | 11 | 1.458 | 0.287 | 0.637 | 0.149 | 12 | 0.852 | 0.070 | 12 | 0.744 | 0.152 | 1.568 | 0.336 | 11 | 1.897 | 0.238 | 12 | 1.733 | 0.233 |
| At4g13200.1 | 0.910 | 0.123 | 6 | 1.608 | 0.092 | 5 | 1.259 | 0.494 | 0.630 | 0.079 | 6 | 1.027 | 0.173 | 5 | 0.828 | 0.281 | 0.805 | 0.205 | 6 | 1.132 | 0.161 | 5 | 0.969 | 0.231 |
| At4g19170.1 | 0.951 | 0.575 | 4 | 3.140 | 0.587 | 2 | 2.046 | 1.548 | 1.260 | 0.930 | 4 | 5.362 | 0.080 | 2 | 3.311 | 2.901 | 0.370 | 0.248 | 4 | 0.544 | 0.062 | 2 | 0.457 | 0.123 |
| At4g22240.1 | 1.337 | 0.192 | 14 | 1.630 | 0.208 | 10 | 1.484 | 0.207 | 0.565 | 0.090 | 13 | 0.546 | 0.065 | 12 | 0.555 | 0.013 | 1.490 | 0.291 | 10 | 2.829 | 0.300 | 12 | 2.159 | 0.947 |
| At4g31390.1 | 1.583 | 0.240 | 6 | 1.302 | 0.016 | 2 | 1.442 | 0.199 | 0.537 | 0.107 | 5 | 0.678 | 0.028 | 2 | 0.607 | 0.099 | 1.956 | 0.243 | 7 | 1.795 | 0.206 | 2 | 1.876 | 0.114 |
| At4g32770.1 | 0.523 | 0.197 | 4 | 0.835 | 0.390 | 4 | 0.679 | 0.221 | 0.603 | 0.273 | 4 | 1.113 | 0.375 | 4 | 0.858 | 0.361 | | | | 0.865 | 0.439 | 4 | 0.865 | |
| At4g38970.1 | 1.190 | 0.291 | | 0.758 | 0.121 | 8 | 0.974 | 0.306 | 1.440 | 0.248 | | 1.034 | 0.085 | 8 | 1.237 | 0.287 | 0.749 | 0.215 | | 0.690 | 0.050 | 7 | 0.719 | 0.042 |
| At5g05200.1 | 1.282 | 0.191 | 4 | 1.256 | 0.301 | 2 | 1.269 | 0.018 | 0.239 | 0.085 | 4 | | | | 0.239 | | 3.036 | 0.440 | 5 | | | | 3.036 | |
| At5g08740.1 | 0.494 | 0.131 | 11 | 0.630 | 0.235 | 5 | 0.562 | 0.096 | 0.726 | 0.156 | 10 | 1.465 | 0.214 | 6 | 1.095 | 0.523 | 0.597 | 0.143 | 10 | 0.514 | 0.190 | 7 | 0.556 | 0.059 |
| At5g42650.1 | 0.503 | 0.225 | 9 | 1.448 | 0.416 | 6 | 0.976 | 0.668 | 0.797 | 0.211 | 10 | 1.902 | 0.597 | 6 | 1.349 | 0.782 | 0.404 | 0.088 | 6 | 0.877 | 0.223 | 6 | 0.641 | 0.335 |
| AtCg00120 | 16.656 | 8.340 | 5 | 3.634 | 0.980 | 8 | 10.145 | 9.208 | 3.254 | 0.330 | 4 | 1.565 | 0.498 | 8 | 2.409 | 1.194 | 3.464 | 0.778 | 10 | 2.321 | 0.567 | 8 | 2.893 | 0.808 |
| AtCg00340 | | | | 2.131 | 0.358 | 2 | 2.131 | | | | | 1.586 | 0.161 | 2 | 1.586 | | 0.979 | 0.695 | 2 | 1.140 | 0.100 | 2 | 1.060 | 0.114 |
| AtCg00480 | 18.407 | 6.152 | 11 | 3.730 | 0.775 | 16 | 11.069 | 10.378 | 2.344 | 0.742 | 6 | 1.812 | 0.514 | 16 | 2.078 | 0.376 | 3.688 | 0.870 | 15 | 2.221 | 0.435 | 17 | 2.954 | 1.038 |
| AtCg00680 | 1.282 | 0.187 | 3 | | | | 1.282 | | 0.721 | 0.055 | 2 | 1.059 | 0.119 | 2 | 0.890 | 0.239 | 1.167 | 0.098 | 3 | 1.036 | 0.148 | 2 | 1.102 | 0.093 |

Protein averages, standard deviation and number (n) of ratios used for each average are reported for the two replicates for each treatement. The biological average is calculted using the two protein averages. Only peptides present in both labeling experiments within each replica were used. [a] Cannot distinguish between At1g29910.1, At1g29920.1 and At1g29930.1. [b] Cannot distinguish between At5g66570.1 and At3g50820.1. [c] Cannot distinguish between At4g28750.1 and At2g20260.1