**Table S6.** Significant differences in fitness (fruit number) associated with gene functions in fluctuating temperature (PC1veg) and water availability (PC2veg) treatments.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Gene name** | **Locus** | **Mutant line** | **PCveg** | **Genotypea** | **G x Eb** |
| *SDG37* | At2g17900 | SALK\_018048C | PC1 | 0.6747 | 0.0858 |
| *CPN10* | At1g14980 | SALK\_081250C | PC1 | 0.5156 | 0.6112 |
| *TCP10* | At2g31070 | SALK\_137205C | PC1 | 0.7368 | 0.7040 |
| *HSP70* | At3g12580 | SALK\_038113 | PC1 | 0.1295 | 0.9246 |
| *HSP83* | At5g52640 | SALK\_065166 | PC1 | 0.7323 | 0.4528 |
| *ASIL1.14* | At1g54050 | SALK\_072866 | PC1 | 0.0156 | 0.1490 |
| *T1P17.2* | At4g12400 | SALK\_023494 | PC1 | 0.0642 | 0.2463 |
| *ARP6* | At3g33520 | SALK\_037471C | PC1 | 0.4568 | 0.3258 |
| *ROP10* | At3g48040 | SALK\_018747C | PC2 | 0.8883 | 0.9549 |
| *AAO3* | At2g27150 | SALK\_072361C | PC2 | 0.0001\*\*\* | 0.0007\*\* |
| *ATTPS5* | At4g17770 | SALK\_007952 | PC2 | 0.4695 | 0.3964 |
| *GASA1* | At1g75750 | SALK\_001187C | PC2 | 0.5101 | 0.7903 |
| *ALDH7B4* | At1g54100 | SALK\_030725 | PC2 | 0.0013\* | 0.0080\* |
| *CIPK20* | At5g45820 | SALK\_003402 | PC2 | 0.6417 | 0.8415 |

Genes identified in PC1veg were subjected to either normal or fluctuating temperature, and in PC2veg to well- or moderately-watered conditions. ap-values for effect of mutant vs. wild-type allele, bp-values for interaction of genotype (wild-type vs. mutant allele) with environmental conditions. \* *p* < 0.01, \*\* *p* < 0.001, \*\*\* *p* < 0.0001.