

Species	Orthogroup	Orthogroup description	Contigs used from Yang 2015 paper
<i>P. aegyptiaca</i>	2325	Aspartate aminotransferase 3 - Chloroplastic (orthogroup also contains cytoplasmic homologs in <i>A. thaliana</i>)	OrAeBC5_403.1
<i>P. aegyptiaca</i>	5243	Aspartate aminotransferase 5 - Chloroplastic	OrAeBC5_6581.1 - OrAeBC5_6581.9
<i>P. aegyptiaca</i>	4541	Aspartate aminotransferase 1 - Mitochondrial	OrAeBC5_36203.1, OrAeBC5_41726.1, OrAeBC5_49270.1, and OrAeBC5_53771.1
<i>P. aegyptiaca</i>	2682	Aspartate aminotransferase - Chloroplastic; prokaryotic-type	OrAeBC5_520.1
<i>T. versicolor</i>	2325	Aspartate aminotransferase 3 - Chloroplastic (orthogroup also contains cytoplasmic homologs in <i>A. thaliana</i>)	TrVeBC3_1788.1 and TrVeBC3_1788.2
<i>T. versicolor</i>	5243	Aspartate aminotransferase 5 - Chloroplastic	TrVeBC3_3479.1
<i>T. versicolor</i>	4541	Aspartate aminotransferase 1 - Mitochondrial	TrVeBC3_2450.4, TrVeBC3_2450.5, TrVeBC3_2450.7, TrVeBC3_2450.8, TrVeBC3_2450.9, TrVeBC3_2450.10, TrVeBC3_2450.13, TrVeBC3_2450.14, and TrVeBC3_2450.15
<i>T. versicolor</i>	2682	Aspartate aminotransferase - Chloroplastic; prokaryotic-type	TrVeBC3_2708.1
<i>P. aegyptiaca</i>	721	Asparagine synthase - Class I	OrAeBC5_258.1
<i>P. aegyptiaca</i>	721	Asparagine synthase - Class II	OrAeBC5_6915.1
<i>T. versicolor</i>	721	Asparagine synthase - Class I	TrVeBC3_621.1 - TrVeBC3_621.8
<i>T. versicolor</i>	721	Asparagine synthase - Class II	TrVeBC3_4470.1

Table S2. Contigs used for expression analysis of two amino acid metabolism genes. Contigs and orthogroups described in Yang et al. 2015 [20] and used for expression analysis in Figure 8. Phylogenies of represented orthogroups are shown in Figure S2. Orthogroup descriptions are based on annotation of *A. thaliana* homologs present within the orthogroup. When multiple contigs are used, those contigs can be manually assembled and the sum of the FPKMs is used for analysis.