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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | | | | |  | | | |
|  |  |  |  | PLANT PATHWAY | | | | | | | ANIMAL PATHWAY | |
|  |  |  |  | VTC3 | GME | VTC2 | VTC4 | L-galdh | | GLDH | SMP30 | GULO |
| GenBank ESTs | Bangiophyceae | *Porphyra* | *umbilicalis* | *✓* | *✓* |  |  | *✓* | | *✓* |  |  |
| GenBank ESTs | Bangiophyceae | *Porphyra* | *purpurea* | *✓* | *✓* |  |  | *✓* | | *✓* |  |  |
|  |  |  |  |  |  |  |  |  | |  |  |  |
| MMETSP0312 | Compsopogonophyceae | *Compsopogon* | *coeruleus* | *✓* | *✓* |  |  | *✓* | | *✓* |  |  |
| MMETSP0011\_2 | Rhodellophyceae | *Rhodosorus* | *marinus* | *✓* | *✓* |  | *✓* | *✓* | | *✓* |  |  |
| MMETSP0315 | Rhodellophyceae | *Rhodosorus* | *marinus* |  | *✓* |  | *✓* | *✓* | | *✓* |  |  |
| MMETSP0167 | Rhodellophyceae | *Rhodella* | *maculata* |  | *✓* |  |  | *✓* | | *✓* |  |  |
| MMETSP0314 | Rhodellophyceae | *Rhodella* | *maculata* |  | *✓* |  |  | *✓* | | *✓* |  |  |
| MMETSP0313 | Porphyridiophyceae | *Porphyridium* | *aerugineum* |  | *✓* |  |  | *✓* | | *✓* |  |  |
| MMETSP1172 | Porphyridiophyceae | *Timspurckia* | *oligopyrenoides* |  |  |  |  |  | | *✓* |  |  |
| MMETSP1353 | Porphyridiophyceae | *Erythrolobus* | *australicus* |  | *✓* |  |  |  | | *✓* |  |  |
|  |  |  |  |  |  |  |  |  | |  |  |  |
| GenBank TSA | Chlorokybophyceae | *Chlorokybus* | *atmophyticus* | *✓* | *✓* | *✓* | *✓* | *✓* | |  | *✓* | *✓* |

**Supplementary File 4: Distribution of ascorbate biosynthetic genes in selected Archaeplastida transcriptomes**