

Fig. 5- figure supplement 2. Core plastid metabolism proteins not identified within the ancestral HPPG dataset.

Enzyme	Pathway	Distribution	Probable explanation	References
Sedoheptulose-bis-phosphatase	CBB cycle	Multiple isoforms	Functionally conserved, but with different LGT events in different ochrophyte lineages	Fig. supplement 3
Transaldolase	CBB cycle	Hypogyristera and diatoms	Functionally complemented by sedoheptulose-bis-phosphatase/ fructose-bisphosphate aldolase	Kroth et al., 2008
Isopropylmalate dehydrogenase	Leucine biosynthesis	Multiple isoforms	Functionally conserved, but with different LGT events in different ochrophyte lineages	Fig. supplement 4
3-dehydroquinate synthase	Shikimate biosynthesis	Multiple isoforms	Functionally conserved, but with different LGT events in different ochrophyte lineages	Fig. supplement 5
Shikimate kinase	Shikimate biosynthesis	Multiple isoforms	Functionally conserved, but with different LGT events in different ochrophyte lineages	Fig. supplement 6
APS kinase	Fe-S cluster biosynthesis	Not found	Functionally dispensible; may be complemented by PAPS reductase	Gutierrez-Marcos et al. 1996
Magnesium protoporphyrin IX methylmonoester cyclase	Chlorophyll biosynthesis	Not found	Not known to be essential for chlorophyll metabolism outside of green lineage	Tanaka and Tanaka 2007
Isopentenyl diphosphate isomerase	Carotenoid biosynthesis	Not found	Dispensible for isoprenoid metabolism	Ershov et al. 2000; Rohdich et al. 2002
rps15	Ribosomal small subunit	Not found	Not known outside of green lineage	Green 2011