

Supplementary Information

Abbreviations:

AACT, acetyl-CoA acetyltransferase;
HMGS, hydroxymethylglutaryl-CoA synthase;
HMGR, 3-hydroxy-3-methylglutaryl-coenzyme A reductase;
MK, mevalonate kinase;
PMK, phosphomevalonate kinase;
MVD, diphosphomevalonate decarboxylase;
DXS, 1-deoxy-D-xylulose-5-phosphate synthase;
DXR, 1-deoxy-D-xylulose-5-phosphate reductoisomerase;
MCT, 2-C-methyl-D-erythritol 4-phosphate cytidylyltransferase;
MCS, 2-C-methyl-D-erythritol 2,4-cyclodiphosphate synthase;
CMK, 4-diphosphocytidyl-2-C-methyl-D-erythritol kinase;
HDS, 4-hydroxy-3-methylbut-2-enyl diphosphate synthase;
IDS, 4-hydroxy-3-methylbut-2-enyldiphosphate reductase (isopentenyl/dimethylallyl diphosphate synthase);
IDI, isopentenyl-diphosphate delta-isomerase;
GPPS, geranyl diphosphate synthase;
CYP450, cytochrome P450;
G10H, geraniol 10-hydroxylase;
10HGO, 10-hydroxygeraniol oxidoreductase;
G8O, geraniol 8-oxidase;
8-HGO, 8-hydroxygeraniol oxidoreductase;
IS, iridoid synthase;
IO, iridoid oxidase;
7-DLGT, 7-deoxyloganetic acid glucosyltransferase;
7-DLH, 7-deoxyloganic acid hydroxylase;
LAMT, loganic acid *O*-methyltransferase;
SLS, secologanin synthase (TIF).

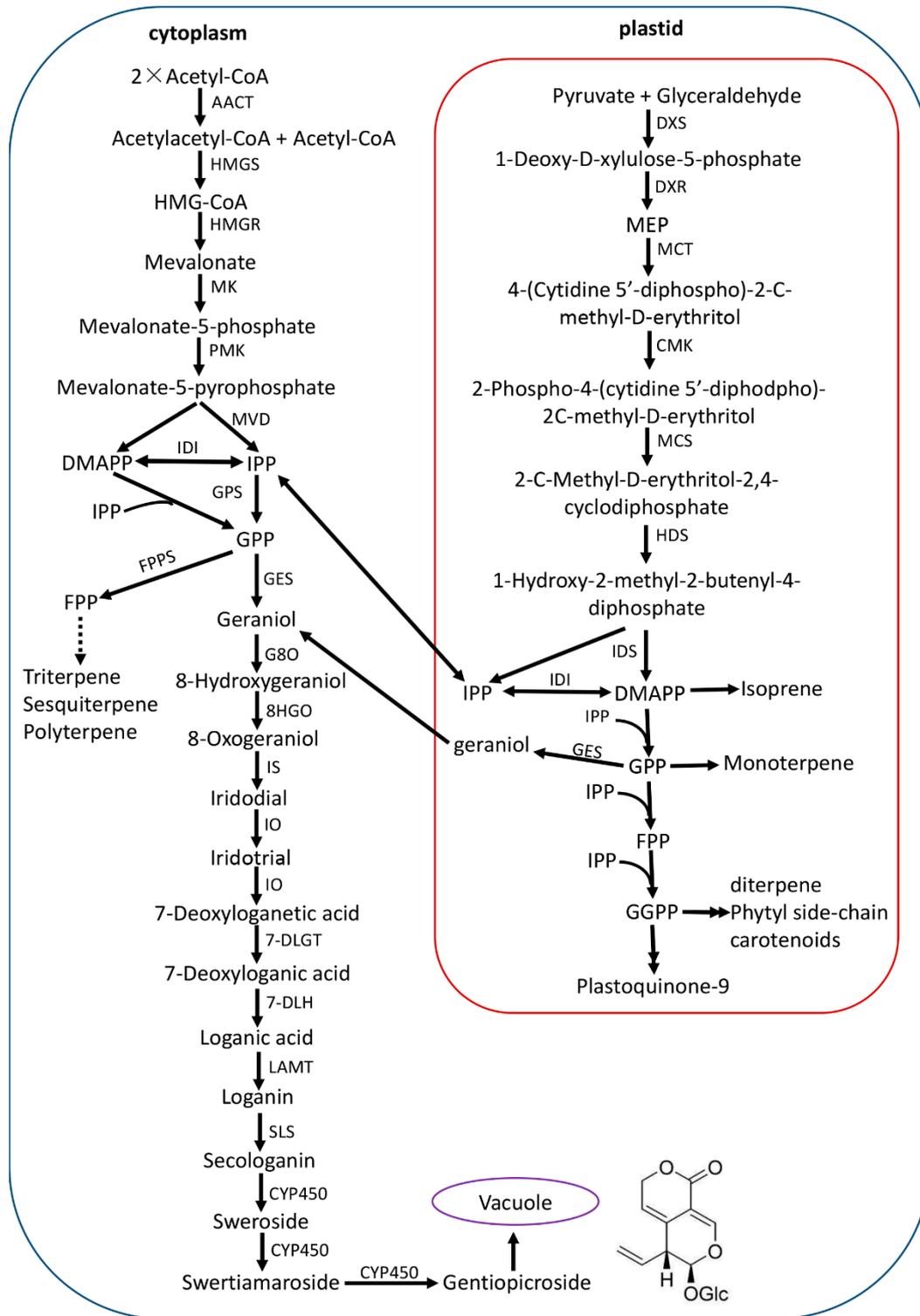
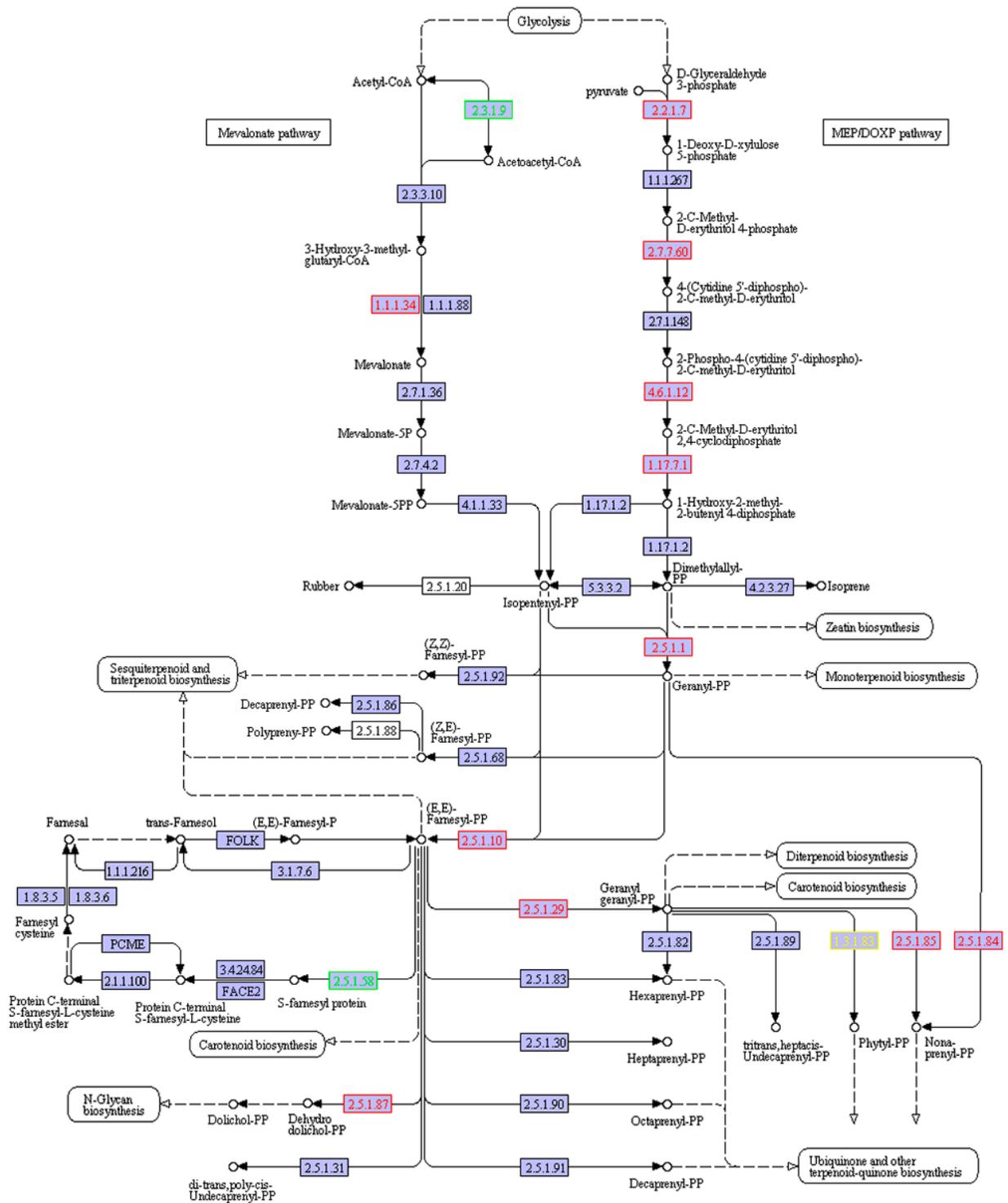


Figure S1. Putative biosynthesis pathway of gentiopicoside.

TERPENOID BACKBONE BIOSYNTHESIS



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Figure S2. KEGG enriched pathway of terpenoid backbone biosynthesis (TIF).