

Supplementary Table S3. Biosynthetic pathway genes of ginsenoside CK.

Gene	Abbreviation	Function	Level 0	Promoter	Terminator
Dammarenediol synthase	<i>PgDS</i>	Cyclization of 2,3-oxidosqualene yields dammarenediol	pCE3-Pgpd-TtrpC	Pgpd	TtrpC
Cytochrome P450	<i>PgPPDS</i> <i>(PgCYP716A47)</i>	C12 hydroxylation	pCE3-Pgpd-TtrpC	Pgpd	TtrpC
Cytochrome P450 reductase	<i>PgATR1</i>	Electron donor of CYP450	pCE3-PGltrpC-TGltrpC	PGltrpC	TGltrpC
UDP-glycosyltransferase	<i>UGTPgI</i>	C20 hydroxyl glycosylation	pCE3-PsdhB-TsdhB	PsdhB	TsdhB
Loss of aflR expression-A	<i>GLaeA</i>	Global transcriptional regulator	pCE3-PGltrpC-TGltrpC	PGltrpC	TGltrpC