

Table S1. Enzymatic catalysis in the flavonoid synthesis pathway in tea plants.

Abbreviation	Enzyme	Catalytic Reaction	Reference
PAL	Phenylalanine Ammonia-Lyase	Phenylalanine→Cinnamic acid	[1, 2]
C4H	Trans-cinnamate 4-Monooxygenase	Cinnamic acid→p-Coumaric acid / Cinnamoyl-CoA→p-Coumaroyl-CoA	[3, 4]
F3'5'H	Flavonoid 3'5'-Hydroxylase	(Dihydro) Kaempferol → (Dihydro) Quercetin → (Dihydro) Myricetin	[5, 6]
F3'H	Flavonoid 3'-Hydroxylase	(Dihydro) Kaempferol → (Dihydro) Quercetin	[6, 7]
FNSII	Flavone Synthase II	Dihydroflavone → Flavaones	[8, 9]
4CL	4-Coumarate--CoA Ligase	Cinnamic acid → Cinnamoyl-CoA / p-Coumaric acid → p-Coumaroyl-CoA	[10, 11]
CHS	Chalcone Synthase	p-Coumaroyl-CoA → Naringenin chalcone	[12, 13]
CHI	Chalcone Isomerase	Chalcones → Dihydroflavone	[14, 15]
ANS	Anthocyanidin Synthase / Leucocyanidin Oxygenase	Leucoanthocyanidins → Anthocyanins	[16, 17]
LDOX	Leucoanthocyanidin Dioxygenase	Leucoanthocyanidins / Catechins → Anthocyanins	[18, 19]
F3H	Naringenin 3-Dioxygenase / Flavanone 3-Dioxygenase	Dihydroflavone → Dihydroflavonols	[20, 21]
FLS	Flavonol Synthase	Dihydroflavonols→Flavonols	[22, 23]
LAR	Leucoanthocyanidin Reductase	Leucoanthocyanidins → Catechins	[24, 25]
DFR	Dihydroflavonol 4-Reductase/Flavanone 4-Reductase	Dihydroflavonols → Leucoanthocyanidins	[26, 27]
ANR	Anthocyanidin Reductase	Anthocyanins → Catechins	[28, 29]
PPO	Polyphenol Oxidase	Catechins → Theaflavin	[30, 31]
SCPLIA	Serine Carboxypeptidase-Like	Epicatechins → Epicatechins Gallate	[32, 33]
UGT84A	Uridine Diphosphate Galloyglycosyltransferase	Gallic acid → β-Glucogallin	[34, 35]

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