

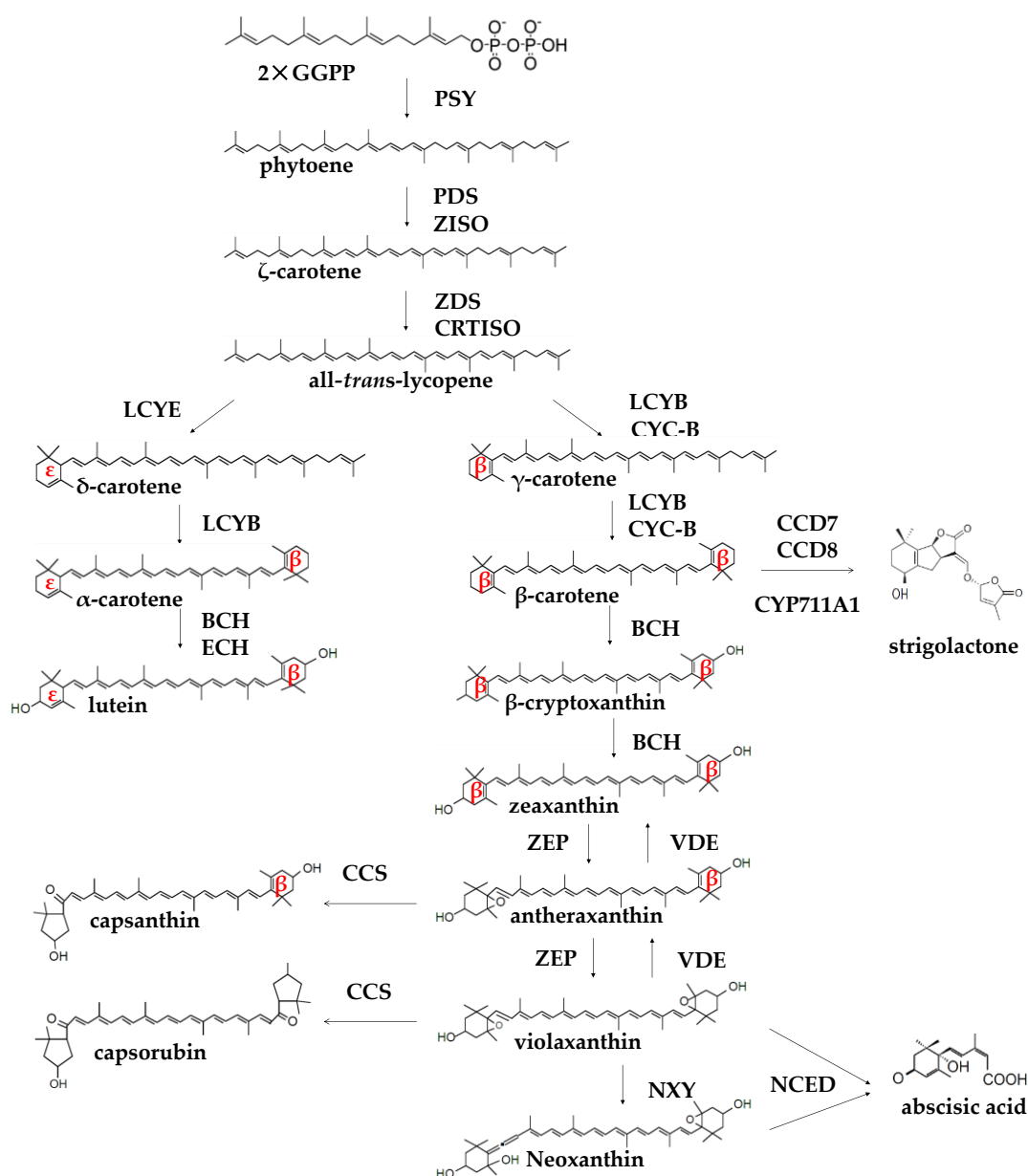


Figure S1. The carotenoid biosynthesis and cleavage pathway in plants (modified from Moise et al. [9] and Colasuonno et al. [21]). PSY, phytoene synthase; PDS, phytoene desaturase; ZDS, ζ-carotene desaturase; ZISO, 15-cis-ζ-carotene isomerase; CRTISO, carotene isomerase; LCYE, lycopene ε-cyclase; LCYB, lycopene β-cyclase; CYCB, chromoplast-specific lycopene β-cyclase; BCH, β-carotene hydroxylase; ECH, ε-carotene hydroxylase; ZEP, zeaxanthin epoxidase; VDE, violaxanthin de-epoxidase; NXY, neoxanthin synthase; CCS, capsanthin-capsorubin synthase; CCD7, (9',10') carotenoid cleavage dioxygenases; CCD8, (13,14) carotenoid cleavage dioxygenases; CYP711A1, cytochrome P450-type enzyme; NCED, nine-cis-epoxycarotenoid dioxygenase.

The sequence of the cloned CYC-B gene:

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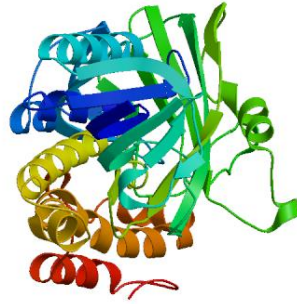


Figure S2. The three dimensional structure prediction of CYCB protein