

Supplemental material – Figures



Fig S1. Summary of carotenoid content in ripe fruit.

12 lines were subjected to HPLC-PDA and the carotenoids identified were quantified based on carotenoid standards. One way ANOVA with tukey post-hoc statistical analysis was carried out and lines grouped based on their significance within the panel of lines ($P < 0.05$). Error bars represent $\pm\text{SE}$ (n=3). Bar colour represents: red, high intensity; green, medium intensity; blue, low intensity. Total coloured carotenoids represents the sum of all carotenoids identified (neoxanthin, violaxanthin, antheraxanthin, capsanthin, zeaxanthin, β -cryptoxanthin, β -carotene, and capsorubin) excluding phytoene and phytofluene.

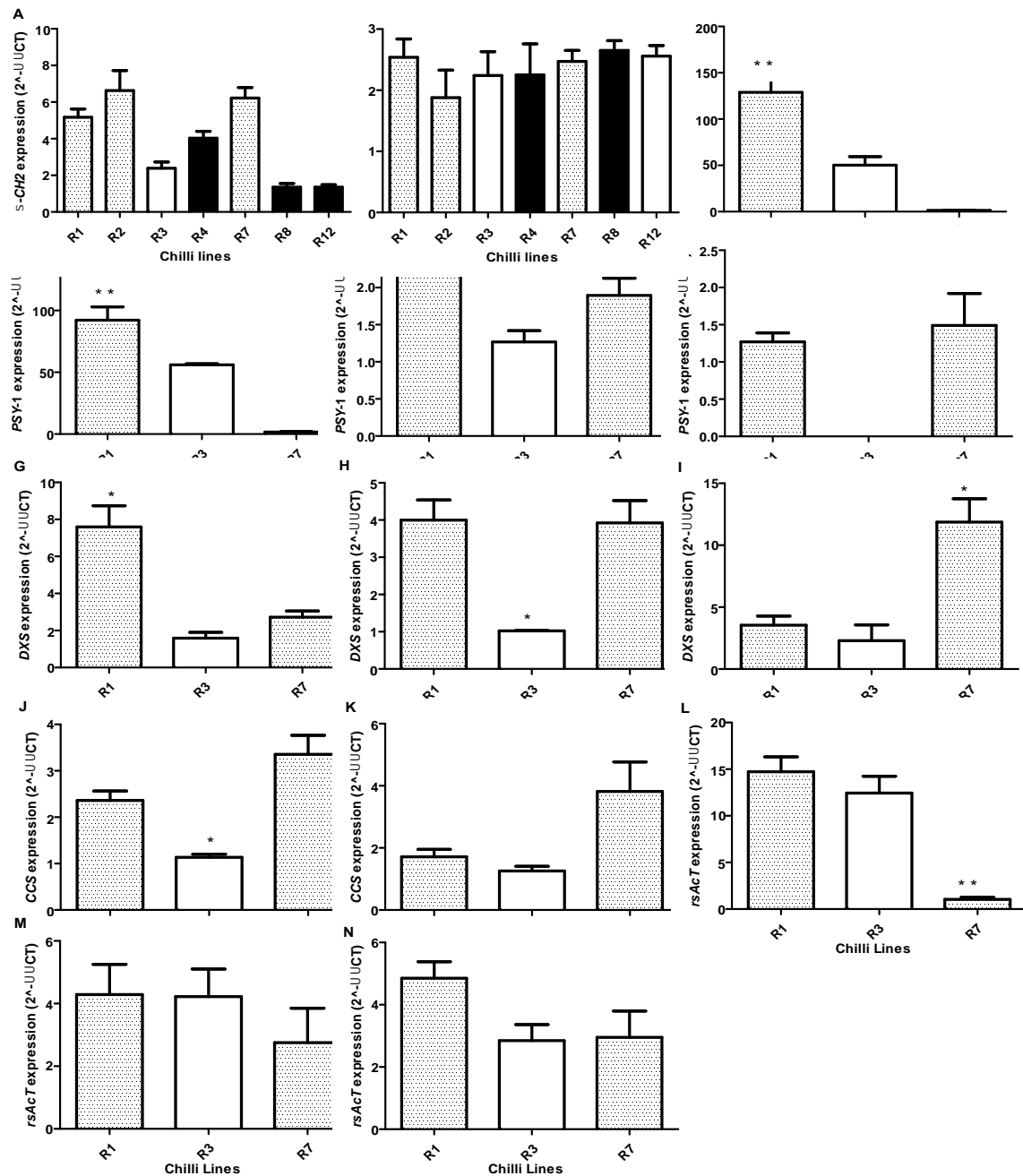


Fig S2. Direct comparisons of gene expression analysis: *PSY-1*, *PSY-2*, *DXS* and acyl transferase.

A comparison of *-CHY2* (A) and *CCS* (B) expression across the panel in ripe fruit. A direct comparison of *PSY-1* expression (C) breaker, (D) breaker plus 3 days, (E) breaker plus 10 days, (F) breaker plus 14 days. A direct comparison of relative *DXS* expression at (G) breaker plus 3 days, (H) breaker plus 7 days, and (I) breaker plus 10 days. *CCS* expression was directly compared at (J) breaker plus 7 days and (K) breaker plus 10 days. A direct comparison of the ripening specific acyl transferase at (L) breaker plus 3 days, (M) breaker plus 7 days, and (N) breaker plus 10 days. Error bars represent \pm SE (n=3). Key: spotted bars, high intensity lines; white bars, low intensity lines; *, $P < 0.05$; **, $P < 0.01$.

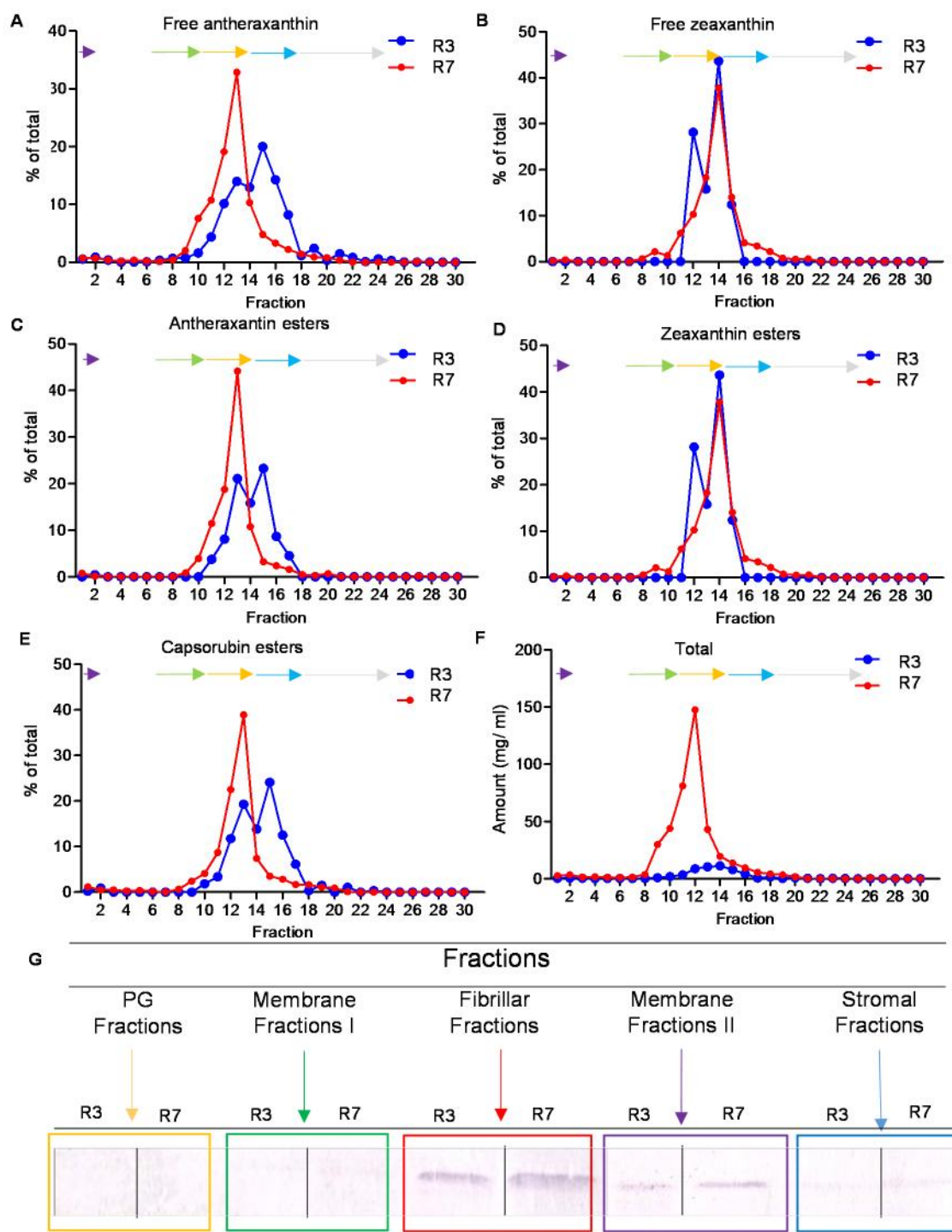


Fig S3. Distribution of pigments and subplastid localisation of PSY across the gradient in a low and high intensity line.

(A-E) Percentage of carotenoids across the gradient (=100% total amount found throughout) in R3 (blue) and R7 (red). (F) Total amount of pigments across the gradient. (G) Immunoblot of PSY across specific subplastid fractions in a low (left-side of box) and high (Right-side of box) intensity line.