

Supplementary Table 1 Carotenoid composition of maize callus expressing a *Psy* transgene

| <i>Psy</i> source | Colored carotenoid composition, % of total ^a | | | | | | phytoene (g/g) ^b |
|---------------------|---|--------------------|--------|--------------|------------|--------------------|-----------------------------|
| | β -carotene | α -carotene | lutein | violaxanthin | neoxanthin | minor xanthophylls | |
| Maize | 51.3 | 22.5 | 19.0 | 3.9 | 0.7 | 2.6 | 96 |
| Rice | 35.5 | 11.0 | 33.1 | 12.9 | n.d. | 7.4 | 59 |
| Tomato | 15.8 | 5.4 | 50.1 | 21.6 | 6.9 | 0.3 | 2.5 |
| Pepper | 10.1 | 3.3 | 41.9 | 43.3 | 1.4 | n.d. | 1.6 |
| Carrot | 8.6 | 2.5 | 51.0 | 25.7 | 11.9 | 0.2 | 3.7 |
| <i>Arabidopsis</i> | 21.1 | 10.5 | 44.1 | 20.4 | 2.4 | 1.6 | 0.4 |
| Daffodil | 15.9 | 4.7 | 49.5 | 21.2 | 6.5 | 2.1 | 0.1 |
| None (empty vector) | 5.4 | 1.4 | 47.0 | 36.9 | 7.4 | 1.9 | 1.0 |

^a Colored carotenoid values are the average for the five calli containing the highest carotenoid content from each population (n.d. is not detected).

^b For phytoene, the content of the 75th percentile sample is shown.