

**Supplementary Table S10** The FPKM values of differential expression genes related to carotenoid biosynthesis

| Gene ID                       | FPKM value |          |          |          |          |          |
|-------------------------------|------------|----------|----------|----------|----------|----------|
|                               | T2DAP-0    | T2DAP-15 | T2DAP-30 | T9DAP-0  | T9DAP-15 | T9DAP-30 |
| <i>CmaCh15G007680 PSY1</i>    | 33.57333   | 173.1367 | 191.0533 | 23.98    | 105.0267 | 67.23333 |
| <i>CmaCh04G022670 PSY1</i>    | 4.866667   | 99.46667 | 108.2367 | 4.003333 | 29.89667 | 9.733333 |
| <i>CmaCh03G002000 lcyB</i>    | 10.36667   | 47.27667 | 32.42667 | 12.8     | 31.47667 | 45.87    |
| <i>CmaCh07G013510 lcyB</i>    | 7.08       | 17.03    | 15.49333 | 6.333333 | 11.49667 | 10.92    |
| <i>CmaCh07G013520 lcyB</i>    | 6.313333   | 11.61    | 2.693333 | 8.77     | 4.47     | 6.78     |
| <i>CmaCh12G013240 lcyE</i>    | 20.63667   | 54.26333 | 19.19333 | 20.83333 | 23.45333 | 23.56333 |
| <i>CmaCh03G011890 CYP97C1</i> | 25.66333   | 5.4      | 5.303333 | 5.136667 | 1.333333 | 3.606667 |
| <i>CmaCh07G008850 CYP97C1</i> | 25.18      | 39.17    | 29.69333 | 29.24667 | 26.17333 | 16.36333 |
| <i>CmaCh02G005460 ZEP</i>     | 30.11667   | 56.38333 | 27.68    | 31.06667 | 66.85333 | 74.56667 |
| <i>CmaCh12G003150 ZEP</i>     | 8.896667   | 14.17    | 23.59667 | 6.656667 | 10.91    | 13.46667 |
| <i>CmaCh12G003160 ZEP</i>     | 2.57       | 6.49     | 7.406667 | 2.8      | 4.316667 | 7.123333 |
| <i>CmaCh02G005960 VDE</i>     | 2.833333   | 9.693333 | 9.44     | 3.54     | 4.786667 | 4.05     |
| <i>CmaCh12G009880 VDE</i>     | 29.47333   | 49.57667 | 113.1333 | 26.21333 | 82.92667 | 31.92    |
| <i>CmaCh03G014040 NCED</i>    | 1.57       | 3.116667 | 4.9      | 13.18333 | 2.046667 | 3.006667 |
| <i>CmaCh04G006430 NCED</i>    | 17.03      | 0.436667 | 0.036667 | 39.15667 | 0.343333 | 0        |
| <i>CmaCh04G006050 NCED</i>    | 4.093333   | 2.983333 | 1.033333 | 11.37    | 8.946667 | 14.55    |
| <i>CmaCh16G005010 NCED</i>    | 25.75333   | 19.25333 | 11.57333 | 18.99    | 35.05    | 41.38333 |
| <i>CmaCh16G005050 CYP707A</i> | 160.71     | 60.11333 | 324.7533 | 59.41333 | 260.35   | 159.2567 |
| <i>CmaCh12G004520 CYP707A</i> | 10.84667   | 13.59333 | 26.34667 | 12.06667 | 15.32333 | 20.36333 |
| <i>CmaCh19G006050 CYP707A</i> | 2.356667   | 1.623333 | 0.92     | 4.33     | 1.313333 | 0.836667 |
| <i>CmaCh16G001000 BCH2</i>    | 109.4933   | 33.11667 | 14.83667 | 0.24     | 0.023333 | 0.01     |
| <i>CmaCh18G012680 BCH2</i>    | 30.68333   | 87.40333 | 143.31   | 23.16333 | 82.86333 | 127.8533 |
| <i>CmaCh04G006080 CYP97B3</i> | 29.23      | 67.40667 | 58.09667 | 24.89667 | 61.78333 | 45.40333 |
| <i>CmaCh16G007340 CYP97A3</i> | 35.79333   | 25.82    | 26.26    | 31.65667 | 14.85    | 10.85333 |

Note: T2 represents the red peel line '2013-12', and T9 represents the gray peel line '9-6'.