

1 **A sweet orange mutant impaired in carotenoid biosynthesis and reduced ABA levels**  
2 **results in altered molecular responses along peel ripening**

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6 **Supplementary Information**

**Table S1.** Selected genes and primers used for qRT-PCR analysis.

| Gene              | Citrus unigene (CFGF DB) | Most similar protein             | Homologous in <i>A. thaliana</i> | Forward / Reverse | Sequence 5' → 3'                                  | Amplicon size (bp) |
|-------------------|--------------------------|----------------------------------|----------------------------------|-------------------|---------------------------------------------------|--------------------|
| <b>CsABF4</b>     | <i>aCL474Contig1</i>     | ABRE binding factor 4            | <i>AT3G19290</i>                 | F<br>R            | GCTGGAGAATCAAATGCTCCT<br>TGCCCTCACCAGAAGCTCCTC    | 216                |
| <b>CsALDH3H1</b>  | <i>aCL5206Contig1</i>    | Aldehyde Dehydrogenase 3 H1      | <i>AT1G44170</i>                 | F<br>R            | GGAGTGAGGAGAGACGAAGA<br>ACGAAGAGCGTCGACGATGTC     | 188                |
| <b>CsATAF1</b>    | <i>aCL943Contig3</i>     | NAC protein                      | <i>AT1G01720</i>                 | F<br>R            | CCCAAATGGAATGATCTAGGC<br>GGACCTAGCATACTACGATGT    | 202                |
| <b>CsCYP707A1</b> | <i>aCL3520Contig1</i>    | ABA-8'-hydroxylase               | <i>AT4G19230</i>                 | F<br>R            | GGCTGGCCTTATATTGGAGAA<br>TTTGCTAGCTGGAAATGTTGG    | 204                |
| <b>CsDREB2A</b>   | <i>aC34205B09EF_c</i>    | AP2-domain DNA-binding protein   | <i>AT5G05410</i>                 | F<br>R            | CGGAGAAATGGACGGTGTGATT<br>CAGACTGGTTGATGACGTCGT   | 254                |
| <b>CsERD14</b>    | <i>aC34103C02EF_c</i>    | Early response to dehydration 14 | <i>AT1G76180</i>                 | F<br>R            | GCCATGAGTACGAGCCGAGTG<br>AGAGCTGCTGGTGGATCGGTG    | 251                |
| <b>CsGBF3</b>     | <i>aCL9402Contig1</i>    | G-box binding factor 3           | <i>AT2G46270</i>                 | F<br>R            | CCCGAGTTGCTATTCCGCCAT<br>GGTTACAGCAGCAGGCGAGGT    | 215                |
| <b>CsRD26</b>     | <i>aCL35Contig5</i>      | Responsive to desiccation 26     | <i>AT4G27410</i>                 | F<br>R            | CCGAACCTTCTGTAGCCTGGT<br>CCCTCCCGACTCAAGATCAC     | 230                |
| <b>CsSTZ</b>      | <i>aCL146Contig3</i>     | Salt tolerance zinc finger       | <i>AT1G27730</i>                 | F<br>R            | GCCTTGAGCCATGGACCAAAC<br>GCAGGAGACTTCTGCCGCTGT    | 172                |
| <b>CsSYP121</b>   | <i>aCL706Contig1</i>     | Syntaxin 121                     | <i>AT3G11820</i>                 | F<br>R            | TCCTTCTCTCGCTTCCGCAGC<br>GCAGGTCTTTCACGGCTTTCG    | 235                |
| <b>CsACT</b>      | <i>aCL563Contig1</i>     | Actin7                           | <i>AT5G09810</i>                 | F<br>R            | TTAACCCCAAGGCCAACAGA<br>TCCCTCATAGATTGGTACAGTAT   | 176                |
| <b>CsGAPDH</b>    | <i>aCL715Contig1</i>     | Glyceraldehyde-3P dehydrogenase  | <i>AT1G13440</i>                 | F<br>R            | CGTCCCTCTGCAAGATGACTCT<br>GGAAGGTC AAGATCGGAATCAA | 204                |
| <b>CsTUB</b>      | <i>aCL2738Contig1</i>    | Tubulin1                         | <i>AT1G75780</i>                 | F<br>R            | GCATCTTGAACCCGGTAC<br>ATCAATTCGGCGCCTTCAG         | 158                |

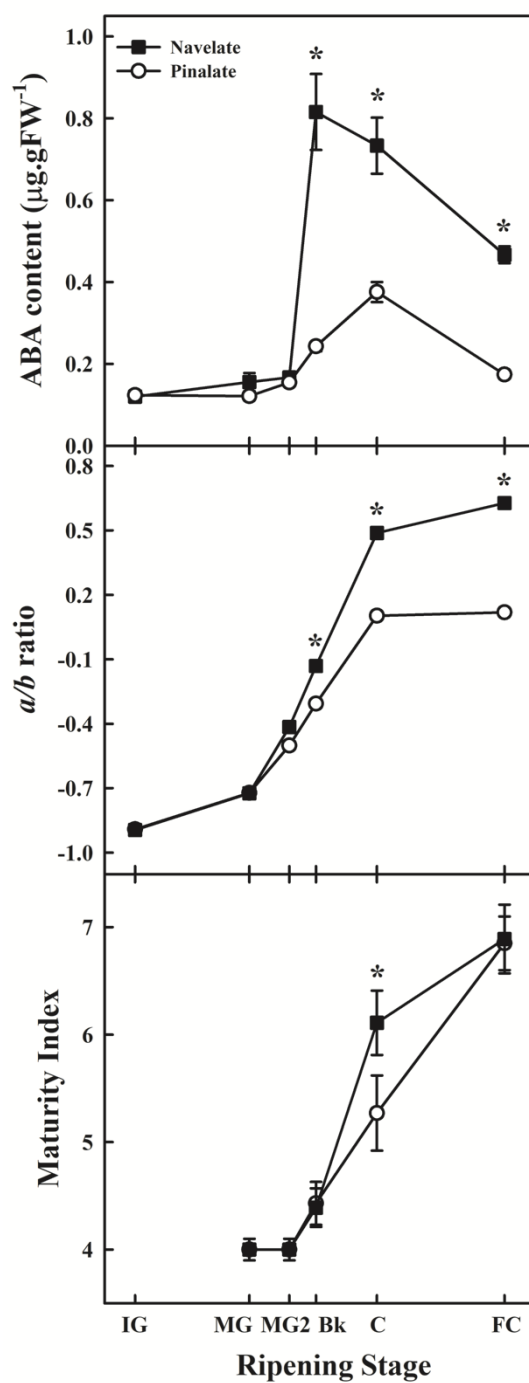
**Table S2.** Genes belonging to the most specific photosynthesis-related functional categories included in Table 1 and Table 2. Numbers in bold indicate statistically (SAM analysis, FDR<0.01) significant inductions or repressions in the first term of the comparison.

| photosynthesis, light reaction (GO:0019684)                                                                     |  | Level 5 BP                   |                              |                              |                              |                              |                              |                              |                              |                              |  |
|-----------------------------------------------------------------------------------------------------------------|--|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|--|
|                                                                                                                 |  | Log <sub>2</sub> (BKN / MGN) | Log <sub>2</sub> (FCN / MGN) | Log <sub>2</sub> (FCN / BKN) | Log <sub>2</sub> (BKP / MGP) | Log <sub>2</sub> (FCP / MGP) | Log <sub>2</sub> (FCP / BKP) | Log <sub>2</sub> (MGP / MGN) | Log <sub>2</sub> (BKP / BKN) | Log <sub>2</sub> (FCP / FCN) |  |
| #name                                                                                                           |  |                              |                              |                              |                              |                              |                              |                              |                              |                              |  |
| AT5G64040 Photosystem I reaction centre subunit N - chloroplast precursor (unigene aCL1971Contig1)              |  | -1.05                        | -1.45                        | -0.40                        | -1.01                        | -3.99                        | -2.98                        | 0.72                         | 0.75                         | -1.83                        |  |
| AT4G11960 expressed protein (unigene aC31502D09EF c)                                                            |  | 0.89                         | -0.54                        | -1.43                        | 0.56                         | -3.95                        | -4.50                        | 0.93                         | 0.60                         | -2.48                        |  |
| AT1G55670 Photosystem I reaction center subunit V - chloroplast precursor (unigene aCL223Contig1)               |  | -0.80                        | -1.25                        | -0.45                        | -0.70                        | -3.88                        | -3.17                        | 0.55                         | 0.65                         | -2.08                        |  |
| AT4G12800 Photosystem I subunit XI (unigene aCL2872Contig1)                                                     |  | 0.45                         | -1.42                        | -1.87                        | 0.65                         | -3.71                        | -4.35                        | 0.53                         | 0.73                         | -1.75                        |  |
| AT1G60950 Ferredoxin - chloroplast precursor (unigene aCL6164Contig1)                                           |  | 0.30                         | -1.30                        | -1.60                        | -0.15                        | -3.43                        | -3.28                        | 0.01                         | -0.45                        | -2.12                        |  |
| AT1G79040 Chloroplast photosystem II 10 kDa protein (unigene aCL148Contig1)                                     |  | -0.16                        | -1.54                        | -1.38                        | 0.28                         | -3.27                        | -3.55                        | 0.34                         | 0.78                         | -1.39                        |  |
| AT2G46820 Thylakoid membrane phosphoprotein 14 kDa - chloroplast precursor (unigene aCL5188Contig1)             |  | -1.48                        | -1.68                        | -0.20                        | -0.45                        | -2.95                        | -2.50                        | 0.79                         | 1.82                         | -0.49                        |  |
| ATCG00280 Photosystem II 44 kDa reaction center protein precursor (unigene aKN0AAQ3YK09RM1 c)                   |  | 0.63                         | -1.62                        | -2.25                        | -2.58                        | -2.15                        | 0.43                         | 0.68                         | -2.53                        | 0.15                         |  |
| AT2G05620 Expressed protein (unigene aCL3774Contig1)                                                            |  | 0.46                         | -0.58                        | -1.04                        | -1.02                        | -1.90                        | -0.88                        | -0.18                        | -1.66                        | -1.50                        |  |
| AT3G61470 Chlorophyll a-b binding protein 7 - chloroplast precursor (unigene aCL242Contig1)                     |  | -0.97                        | -1.27                        | -0.30                        | -0.09                        | -1.82                        | -1.73                        | 0.29                         | 1.17                         | -0.26                        |  |
| AT1G60600 At1g60600 (unigene aC31006G09EF c)                                                                    |  | 0.58                         | 0.57                         | -0.01                        | 0.48                         | -1.63                        | -2.12                        | 1.46                         | 1.36                         | -0.74                        |  |
| AT3G11670 Digalactosyldiacylglycerol synthase 1 (unigene aCL2418Contig1)                                        |  | 0.12                         | -0.43                        | -0.55                        | 0.50                         | -1.39                        | -1.89                        | -0.14                        | 0.24                         | -1.11                        |  |
| chlorophyll binding (GO:0016168)                                                                                |  | Level 4 MF                   |                              |                              |                              |                              |                              |                              |                              |                              |  |
|                                                                                                                 |  | Log <sub>2</sub> (BKN / MGN) | Log <sub>2</sub> (FCN / MGN) | Log <sub>2</sub> (FCN / BKN) | Log <sub>2</sub> (BKP / MGP) | Log <sub>2</sub> (FCP / MGP) | Log <sub>2</sub> (FCP / BKP) | Log <sub>2</sub> (MGP / MGN) | Log <sub>2</sub> (BKP / BKN) | Log <sub>2</sub> (FCP / FCN) |  |
| #name                                                                                                           |  |                              |                              |                              |                              |                              |                              |                              |                              |                              |  |
| AT5G01530 Lhcb4-protein (unigene aCL397Contig1)                                                                 |  | -1.45                        | -4.03                        | -2.58                        | -1.09                        | -5.81                        | -4.72                        | 1.10                         | 1.46                         | -0.68                        |  |
| AT1G61520 Chlorophyll a-b binding protein 8 - chloroplast precursor (unigene aCL247Contig1)                     |  | -2.51                        | -3.33                        | -0.82                        | -1.23                        | -4.42                        | -3.19                        | 0.34                         | 1.62                         | -0.75                        |  |
| AT1G15820 Chlorophyll a/b-binding protein CP24 (unigene aCL1214Contig1)                                         |  | -1.41                        | -2.74                        | -1.33                        | -0.73                        | -3.89                        | -3.16                        | 0.98                         | 1.67                         | -0.17                        |  |
| AT1G29910 Chlorophyll a/b-binding protein (unigene aCL14Contig7)                                                |  | -0.86                        | -2.59                        | -1.73                        | -0.72                        | -4.63                        | -3.92                        | 0.85                         | 1.00                         | -1.19                        |  |
| AT3G47470 Chlorophyll a/b-binding protein (unigene aCL2238Contig1)                                              |  | -1.91                        | -2.45                        | -0.54                        | -1.38                        | -3.35                        | -1.98                        | 0.88                         | 1.42                         | -0.02                        |  |
| ATCG00280 Photosystem II 44 kDa reaction center protein precursor (unigene aKN0AAQ3YK09RM1 c)                   |  | 0.63                         | -1.62                        | -2.25                        | -2.58                        | -2.15                        | 0.43                         | 0.68                         | -2.53                        | 0.15                         |  |
| chlorophyll binding (GO:0016168)                                                                                |  | Level 4 MF                   |                              |                              |                              |                              |                              |                              |                              |                              |  |
|                                                                                                                 |  | Log <sub>2</sub> (BKN / MGN) | Log <sub>2</sub> (FCN / MGN) | Log <sub>2</sub> (FCN / BKN) | Log <sub>2</sub> (BKP / MGP) | Log <sub>2</sub> (FCP / MGP) | Log <sub>2</sub> (FCP / BKP) | Log <sub>2</sub> (MGP / MGN) | Log <sub>2</sub> (BKP / BKN) | Log <sub>2</sub> (FCP / FCN) |  |
| #name                                                                                                           |  |                              |                              |                              |                              |                              |                              |                              |                              |                              |  |
| AT5G01530 Lhcb4-protein (unigene aCL397Contig1)                                                                 |  | -1.45                        | -4.03                        | -2.58                        | -1.09                        | -5.81                        | -4.72                        | 1.10                         | 1.46                         | -0.68                        |  |
| AT1G29910 Chlorophyll a/b-binding protein (unigene aCL14Contig7)                                                |  | -0.86                        | -2.59                        | -1.73                        | -0.72                        | -4.63                        | -3.92                        | 0.85                         | 1.00                         | -1.19                        |  |
| AT4G10340 Type I (26 kD) CP29 polypeptide (unigene aCL93Contig2)                                                |  | -1.45                        | -3.31                        | -1.85                        | -2.17                        | -4.50                        | -2.33                        | 0.86                         | 0.15                         | -0.33                        |  |
| AT1G61520 Chlorophyll a-b binding protein 8 - chloroplast precursor (unigene aCL247Contig1)                     |  | -2.51                        | -3.33                        | -0.82                        | -1.23                        | -4.42                        | -3.19                        | 0.34                         | 1.62                         | -0.75                        |  |
| AT2G05100 Chlorophyll a-b binding protein 151 - chloroplast precursor (unigene aCL5Contig27)                    |  | -1.33                        | -1.60                        | -0.27                        | -2.72                        | -4.28                        | -1.56                        | 1.13                         | -0.26                        | -1.55                        |  |
| AT1G15820 Chlorophyll a/b-binding protein CP24 (unigene aCL1214Contig1)                                         |  | -1.41                        | -2.74                        | -1.33                        | -0.73                        | -3.89                        | -3.16                        | 0.98                         | 1.67                         | -0.17                        |  |
| AT3G47470 Chlorophyll a/b-binding protein (unigene aCL2238Contig1)                                              |  | -1.91                        | -2.45                        | -0.54                        | -1.38                        | -3.35                        | -1.98                        | 0.88                         | 1.42                         | -0.02                        |  |
| ATCG00350 Photosystem I P700 chlorophyll a apoprotein A1 (unigene aIC0AAA14DF04RM1 c)                           |  | -0.32                        | -1.10                        | -0.78                        | -2.88                        | -2.60                        | 0.27                         | 0.82                         | -1.74                        | -0.69                        |  |
| ATCG00280 Photosystem II 44 kDa reaction center protein precursor (unigene aKN0AAQ3YK09RM1 c)                   |  | 0.63                         | -1.62                        | -2.25                        | -2.58                        | -2.15                        | 0.43                         | 0.68                         | -2.53                        | 0.15                         |  |
| ATCG00350 Photosystem I P700 chlorophyll a apoprotein A1 (unigene aIC0AAA71CD11RM1 c)                           |  | -0.23                        | -1.19                        | -0.96                        | -1.80                        | -2.02                        | -0.22                        | 0.75                         | -0.81                        | -0.07                        |  |
| ATCG00350 Photosystem I P700 chlorophyll a apoprotein A1 (unigene aIC0AAA27CH09RM1 c)                           |  | 0.91                         | -0.93                        | -1.84                        | -0.53                        | -1.90                        | -1.37                        | 0.78                         | -0.65                        | -0.18                        |  |
| AT3G61470 Chlorophyll a-b binding protein 7 - chloroplast precursor (unigene aCL242Contig1)                     |  | -0.97                        | -1.27                        | -0.30                        | -0.09                        | -1.82                        | -1.73                        | 0.29                         | 1.17                         | -0.26                        |  |
| AT1G44575 Photosystem II 22 kDa protein - chloroplast precursor (unigene aCL1349Contig1)                        |  | 0.79                         | -0.83                        | -1.62                        | 0.59                         | -1.66                        | -2.25                        | 0.12                         | -0.08                        | -0.71                        |  |
| AT3G22840 chlorophyll A-B binding family protein / early light-induced protein (EL.... (unigene aC18017H11Rv c) |  | 0.59                         | 1.10                         | 0.51                         | 1.08                         | -0.74                        | -1.82                        | 0.15                         | 0.64                         | -1.69                        |  |
| light-harvesting complex (GO:0030076)                                                                           |  | Level 6 CC                   |                              |                              |                              |                              |                              |                              |                              |                              |  |
|                                                                                                                 |  | Log <sub>2</sub> (BKN / MGN) | Log <sub>2</sub> (FCN / MGN) | Log <sub>2</sub> (FCN / BKN) | Log <sub>2</sub> (BKP / MGP) | Log <sub>2</sub> (FCP / MGP) | Log <sub>2</sub> (FCP / BKP) | Log <sub>2</sub> (MGP / MGN) | Log <sub>2</sub> (BKP / BKN) | Log <sub>2</sub> (FCP / FCN) |  |
| #name                                                                                                           |  |                              |                              |                              |                              |                              |                              |                              |                              |                              |  |
| AT5G01530 Lhcb4-protein (unigene aCL397Contig1)                                                                 |  | -1.45                        | -4.03                        | -2.58                        | -1.09                        | -5.81                        | -4.72                        | 1.10                         | 1.46                         | -0.68                        |  |
| AT5G54270 LHClI type III chlorophyll a/b binding protein (unigene aC31707D09EF c)                               |  | -1.23                        | -2.51                        | -1.28                        | -1.46                        | -4.68                        | -3.23                        | 1.19                         | 0.96                         | -0.99                        |  |
| AT1G29910 Chlorophyll a/b-binding protein (unigene aCL14Contig7)                                                |  | -0.86                        | -2.59                        | -1.73                        | -0.72                        | -4.63                        | -3.92                        | 0.85                         | 1.00                         | -1.19                        |  |
| AT4G10340 Type I (26 kD) CP29 polypeptide (unigene aCL93Contig2)                                                |  | -1.45                        | -3.31                        | -1.85                        | -2.17                        | -4.50                        | -2.33                        | 0.86                         | 0.15                         | -0.33                        |  |
| AT1G61520 Chlorophyll a-b binding protein 8 - chloroplast precursor (unigene aCL247Contig1)                     |  | -2.51                        | -3.33                        | -0.82                        | -1.23                        | -4.42                        | -3.19                        | 0.34                         | 1.62                         | -0.75                        |  |
| AT2G05100 Chlorophyll a-b binding protein 151 - chloroplast precursor (unigene aCL5Contig27)                    |  | -1.33                        | -1.60                        | -0.27                        | -2.72                        | -4.28                        | -1.56                        | 1.13                         | -0.26                        | -1.55                        |  |
| AT3G47470 Chlorophyll a/b-binding protein (unigene aCL2238Contig1)                                              |  | -1.91                        | -2.45                        | -0.54                        | -1.38                        | -3.35                        | -1.98                        | 0.88                         | 1.42                         | -0.02                        |  |
| AT3G61470 Chlorophyll a-b binding protein 7 - chloroplast precursor (unigene aCL242Contig1)                     |  | -0.97                        | -1.27                        | -0.30                        | -0.09                        | -1.82                        | -1.73                        | 0.29                         | 1.17                         | -0.26                        |  |
| AT1G44575 Photosystem II 22 kDa protein - chloroplast precursor (unigene aCL1349Contig1)                        |  | 0.79                         | -0.83                        | -1.62                        | 0.59                         | -1.66                        | -2.25                        | 0.12                         | -0.08                        | -0.71                        |  |

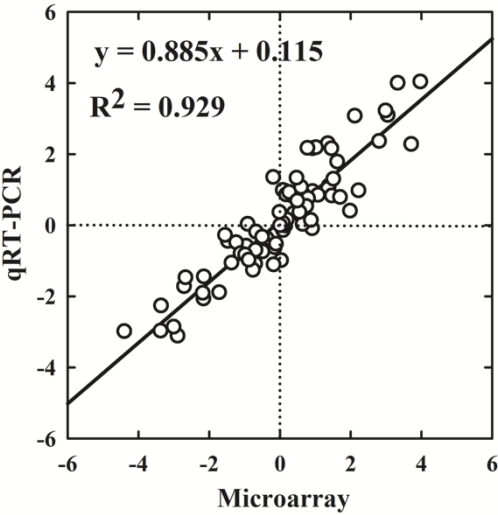
Table S2 (cont.)

| Photosynthesis (ath00195)                                                                                       |  | KEGG                         |                              |                              |                              |                              |                              |                              |                              |                              |  |
|-----------------------------------------------------------------------------------------------------------------|--|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|--|
|                                                                                                                 |  | Log <sub>2</sub> (BKN / MGN) | Log <sub>2</sub> (FCN / MGN) | Log <sub>2</sub> (FCN / BKN) | Log <sub>2</sub> (BKP / MGP) | Log <sub>2</sub> (FCP / MGP) | Log <sub>2</sub> (FCP / BKP) | Log <sub>2</sub> (MGP / MGN) | Log <sub>2</sub> (BKP / BKN) | Log <sub>2</sub> (FCP / FCN) |  |
| #name                                                                                                           |  |                              |                              |                              |                              |                              |                              |                              |                              |                              |  |
| AT1G31330 At1g31330/T19E23_1 (unigene aCL329Contig5)                                                            |  | 0.45                         | -1.14                        | -1.59                        | -0.06                        | -4.54                        | -4.48                        | 0.82                         | 0.30                         | -2.59                        |  |
| AT1G52230 Photosystem I reaction center subunit VI - chloroplast precursor (unigene aCL2388Contig1)             |  | -0.05                        | -1.39                        | -1.34                        | -1.25                        | -4.27                        | -3.01                        | 0.73                         | -0.47                        | -2.14                        |  |
| AT5G64040 Photosystem I reaction centre subunit N - chloroplast precursor (unigene aCL1971Contig1)              |  | -1.05                        | -1.45                        | -0.40                        | -1.01                        | -3.99                        | -2.98                        | 0.72                         | 0.75                         | -1.83                        |  |
| AT1G55670 Photosystem I reaction center subunit V - chloroplast precursor (unigene aCL223Contig1)               |  | -0.80                        | -1.25                        | -0.45                        | -0.70                        | -3.88                        | -3.17                        | 0.55                         | 0.65                         | -2.08                        |  |
| AT4G03280 Cytochrome b6-f complex iron-sulfur subunit - chloroplast precursor (unigene aCL1340Contig1)          |  | 0.29                         | -1.48                        | -1.77                        | -0.54                        | -3.85                        | -3.31                        | 0.33                         | -0.50                        | -2.03                        |  |
| AT4G12800 Photosystem I subunit XI (unigene aCL2872Contig1)                                                     |  | 0.45                         | -1.42                        | -1.87                        | 0.65                         | -3.71                        | -4.35                        | 0.53                         | 0.73                         | -1.75                        |  |
| AT1G60950 Ferredoxin - chloroplast precursor (unigene aCL6164Contig1)                                           |  | 0.30                         | -1.30                        | -1.60                        | -0.15                        | -3.43                        | -3.28                        | 0.01                         | -0.45                        | -2.12                        |  |
| AT1G67740 Photosystem II core complex proteins psbY - chloroplast precursor (L- arg... (unigene aCL1522Contig1) |  | -0.93                        | -3.66                        | -2.73                        | -0.57                        | -3.33                        | -2.76                        | 0.33                         | 0.70                         | 0.66                         |  |
| AT1G79040 Chloroplast photosystem II 10 kDa protein (unigene aCL148Contig1)                                     |  | -0.16                        | -1.54                        | -1.38                        | 0.28                         | -3.27                        | -3.55                        | 0.34                         | 0.78                         | -1.39                        |  |
| AT4G03280 Cytochrome b6-f complex iron-sulfur subunit - chloroplast precursor (unigene aC31006G07EF_c)          |  | 0.47                         | -1.15                        | -1.62                        | 0.02                         | -2.84                        | -2.86                        | 0.68                         | 0.23                         | -1.01                        |  |
| AT2G30570 Photosystem II reaction center W protein - chloroplast precursor (unigene aCL1139Contig1)             |  | 0.41                         | -0.14                        | -0.56                        | -0.40                        | -2.74                        | -2.33                        | 0.49                         | -0.33                        | -2.10                        |  |
| AT4G02770 Photosystem I reaction center subunit II - chloroplast precursor (unigene aCL3140Contig1)             |  | -0.74                        | -2.66                        | -1.93                        | 0.53                         | -2.30                        | -2.83                        | 0.35                         | 1.62                         | 0.71                         |  |
| AT4G09650 Putative H <sup>+</sup> -transporting ATP synthase (unigene aCL2620Contig1)                           |  | 0.14                         | -0.59                        | -0.73                        | 0.48                         | -2.05                        | -2.53                        | 0.24                         | 0.59                         | -1.22                        |  |
| AT1G44575 Photosystem II 22 kDa protein - chloroplast precursor (unigene aCL1349Contig1)                        |  | 0.79                         | -0.83                        | -1.62                        | 0.59                         | -1.66                        | -2.25                        | 0.12                         | -0.08                        | -0.71                        |  |
| AT5G66190 Ferredoxin-NADP reductase - chloroplast precursor (unigene aCL2953Contig1)                            |  | -0.48                        | 0.01                         | 0.49                         | 1.55                         | -1.13                        | -2.68                        | 0.07                         | 2.09                         | -1.07                        |  |
| Photosynthesis antenna-proteins (ath00196)                                                                      |  | KEGG                         |                              |                              |                              |                              |                              |                              |                              |                              |  |
|                                                                                                                 |  | Log <sub>2</sub> (BKN / MGN) | Log <sub>2</sub> (FCN / MGN) | Log <sub>2</sub> (FCN / BKN) | Log <sub>2</sub> (BKP / MGP) | Log <sub>2</sub> (FCP / MGP) | Log <sub>2</sub> (FCP / BKP) | Log <sub>2</sub> (MGP / MGN) | Log <sub>2</sub> (BKP / BKN) | Log <sub>2</sub> (FCP / FCN) |  |
| #name                                                                                                           |  |                              |                              |                              |                              |                              |                              |                              |                              |                              |  |
| AT5G01530 Lhcb4-protein (unigene aCL397Contig1)                                                                 |  | -1.45                        | -4.03                        | -2.58                        | -1.09                        | -5.81                        | -4.72                        | 1.10                         | 1.46                         | -0.68                        |  |
| AT5G54270 LHClI type III chlorophyll a/b binding protein (unigene aC31707D09EF_c)                               |  | -1.23                        | -2.51                        | -1.28                        | -1.46                        | -4.68                        | -3.23                        | 1.19                         | 0.96                         | -0.99                        |  |
| AT1G29910 Chlorophyll a/b-binding protein (unigene aCL14Contig7)                                                |  | -0.86                        | -2.59                        | -1.73                        | -0.72                        | -4.63                        | -3.92                        | 0.85                         | 1.00                         | -1.19                        |  |
| AT4G10340 Type I (26 kD) CP29 polypeptide (unigene aCL93Contig2)                                                |  | -1.45                        | -3.31                        | -1.85                        | -2.17                        | -4.50                        | -2.33                        | 0.86                         | 0.15                         | -0.33                        |  |
| AT1G61520 Chlorophyll a-b binding protein 8 - chloroplast precursor (unigene aCL247Contig1)                     |  | -2.51                        | -3.33                        | -0.82                        | -1.23                        | -4.42                        | -3.19                        | 0.34                         | 1.62                         | -0.75                        |  |
| AT2G05100 Chlorophyll a-b binding protein 151 - chloroplast precursor (unigene aCL5Contig27)                    |  | -1.33                        | -1.60                        | -0.27                        | -2.72                        | -4.28                        | -1.56                        | 1.13                         | -0.26                        | -1.55                        |  |
| AT1G15820 Chlorophyll a/b-binding protein CP24 (unigene aCL1214Contig1)                                         |  | -1.41                        | -2.74                        | -1.33                        | -0.73                        | -3.89                        | -3.16                        | 0.98                         | 1.67                         | -0.17                        |  |
| AT3G47470 Chlorophyll a/b-binding protein (unigene aCL2238Contig1)                                              |  | -1.91                        | -2.45                        | -0.54                        | -1.38                        | -3.35                        | -1.98                        | 0.88                         | 1.42                         | -0.02                        |  |
| AT3G61470 Chlorophyll a-b binding protein 7 - chloroplast precursor (unigene aCL242Contig1)                     |  | -0.97                        | -1.27                        | -0.30                        | -0.09                        | -1.82                        | -1.73                        | 0.29                         | 1.17                         | -0.26                        |  |
| Carbon fixation in photosynthetic organisms (ath00710)                                                          |  | KEGG                         |                              |                              |                              |                              |                              |                              |                              |                              |  |
|                                                                                                                 |  | Log <sub>2</sub> (BKN / MGN) | Log <sub>2</sub> (FCN / MGN) | Log <sub>2</sub> (FCN / BKN) | Log <sub>2</sub> (BKP / MGP) | Log <sub>2</sub> (FCP / MGP) | Log <sub>2</sub> (FCP / BKP) | Log <sub>2</sub> (MGP / MGN) | Log <sub>2</sub> (BKP / BKN) | Log <sub>2</sub> (FCP / FCN) |  |
| #name                                                                                                           |  |                              |                              |                              |                              |                              |                              |                              |                              |                              |  |
| AT5G38410 Ribulose bisphosphate carboxylase small chain - chloroplast precursor (unigene aCL43Contig3)          |  | -0.89                        | -2.78                        | -1.88                        | -1.85                        | -4.56                        | -2.72                        | 0.54                         | -0.42                        | -1.25                        |  |
| AT4G38970 Plastidic aldolase (unigene aCL73Contig1)                                                             |  | -0.61                        | -2.39                        | -1.78                        | -0.85                        | -3.67                        | -2.82                        | 0.52                         | 0.27                         | -0.77                        |  |
| AT1G32060 Phosphoribulokinase - chloroplast precursor (unigene aCL1319Contig2)                                  |  | 0.19                         | -0.61                        | -0.80                        | -0.06                        | -2.09                        | -2.03                        | 0.27                         | 0.02                         | -1.20                        |  |
| AT1G23310 F26F24.16 (unigene aCL3840Contig1)                                                                    |  | 0.14                         | -0.58                        | -0.72                        | 0.35                         | -1.67                        | -2.03                        | 0.69                         | 0.90                         | -0.41                        |  |
| AT2G19900 NADP-dependent malic enzyme (unigene aCL158Contig1)                                                   |  | -0.32                        | -0.13                        | 0.19                         | 0.07                         | -1.60                        | -1.67                        | 0.28                         | 0.67                         | -1.19                        |  |
| AT3G60750 Transketolase-like protein (unigene aCL6739Contig1)                                                   |  | -1.14                        | -1.27                        | -0.13                        | -9.00                        | -1.56                        | 9.00                         | 0.09                         | -9.00                        | -0.20                        |  |
| AT1G70580 AlaT1 (unigene aCL7069Contig1)                                                                        |  | -0.02                        | -0.79                        | -0.77                        | 0.90                         | -1.54                        | -2.44                        | 0.29                         | 1.21                         | -0.46                        |  |
| AT2G45290 Transketolase - chloroplast (unigene aCL2018Contig1)                                                  |  | -0.59                        | -0.90                        | -0.31                        | -0.49                        | -1.47                        | -0.98                        | 0.23                         | 0.34                         | -0.33                        |  |
| AT2G22780 Malate dehydrogenase - glyoxysomal precursor (unigene aCL1958Contig1)                                 |  | -0.21                        | -1.05                        | -0.85                        | 0.70                         | -1.25                        | -1.95                        | 0.35                         | 1.26                         | 0.16                         |  |
| AT1G53310 Phosphoenolpyruvate carboxylase - housekeeping isozyme (unigene aCL6459Contig1)                       |  | -0.19                        | -0.65                        | -0.46                        | -1.11                        | -1.14                        | -0.02                        | -0.08                        | -0.99                        | -0.56                        |  |
| AT5G61410 Ribulose-5-phosphate-3-epimerase (unigene aCL2443Contig1)                                             |  | 0.07                         | -0.74                        | -0.81                        | -0.18                        | -1.13                        | -0.95                        | 0.13                         | -0.12                        | -0.26                        |  |
| AT2G30970 Aspartate aminotransferase - mitochondrial precursor (unigene aKN0AAI2DE02FM1_c)                      |  | -0.29                        | -0.66                        | -0.37                        | 0.49                         | -0.99                        | -1.48                        | 0.16                         | 0.94                         | -0.17                        |  |
| AT1G56190 Phosphoglycerate kinase - chloroplast precursor (unigene aCL955Contig2)                               |  | -0.37                        | -0.60                        | -0.22                        | -1.01                        | -0.67                        | 0.34                         | 0.08                         | -0.56                        | 0.00                         |  |
| Flavonoid biosynthesis (ath00941)                                                                               |  | KEGG                         |                              |                              |                              |                              |                              |                              |                              |                              |  |
|                                                                                                                 |  | Log <sub>2</sub> (BKN / MGN) | Log <sub>2</sub> (FCN / MGN) | Log <sub>2</sub> (FCN / BKN) | Log <sub>2</sub> (BKP / MGP) | Log <sub>2</sub> (FCP / MGP) | Log <sub>2</sub> (FCP / BKP) | Log <sub>2</sub> (MGP / MGN) | Log <sub>2</sub> (BKP / BKN) | Log <sub>2</sub> (FCP / FCN) |  |
| #name                                                                                                           |  |                              |                              |                              |                              |                              |                              |                              |                              |                              |  |
| AT5G54160 Eugenol O-methyltransferase (unigene aCL38Contig8)                                                    |  | -3.62                        | -5.45                        | -1.82                        | -4.01                        | -6.74                        | -2.73                        | 0.73                         | 0.34                         | -0.56                        |  |
| AT5G13930 Chalcone synthase 1 (unigene aCL27Contig2)                                                            |  | -1.37                        | 0.01                         | 1.37                         | -1.54                        | -2.64                        | -1.10                        | -0.04                        | -0.22                        | -2.69                        |  |
| AT5G13930 Acridone synthase II (unigene aC31807C06EF_c)                                                         |  | -1.25                        | -0.78                        | 0.46                         | -0.50                        | -2.30                        | -1.80                        | 0.58                         | 1.33                         | -0.93                        |  |
| AT5G54160 Eugenol O-methyltransferase (unigene aC31207A03EF_c)                                                  |  | -0.92                        | -2.95                        | -2.04                        | -0.24                        | -2.17                        | -1.93                        | -0.07                        | 0.60                         | 0.71                         |  |
| AT5G13930 Chalcone synthase (unigene aC31802G12EF_c)                                                            |  | -1.07                        | -0.81                        | 0.26                         | 0.57                         | -2.05                        | -2.61                        | 0.46                         | 2.09                         | -0.79                        |  |
| AT5G54160 Eugenol O-methyltransferase (unigene aC31705B10EF_c)                                                  |  | -1.28                        | -1.72                        | -0.44                        | 0.13                         | -2.03                        | -2.16                        | -0.05                        | 1.36                         | -0.36                        |  |
| AT5G54160 Caffeic acid 3-O-methyltransferase (unigene aCL3343Contig1)                                           |  | -0.65                        | -0.81                        | -0.16                        | -1.02                        | -1.20                        | -0.18                        | 0.57                         | 0.20                         | 0.18                         |  |
| AT5G07990 Cytochrome P450 DDWF1 (unigene aCL9318Contig1)                                                        |  | -0.47                        | -0.65                        | -0.17                        | -0.12                        | -0.88                        | -0.76                        | 0.13                         | 0.48                         | -0.11                        |  |

**Figure S1.** ABA accumulation, color evolution, and maturity index of Navelate (black) and Pinalate (white) fruit along ripening. Results are the means of three biological replicates of 5 fruits each  $\pm$ SE. Asterisks indicate statistical differences between genotypes according to a *t*-test (*p*-value<0.05) for each ripening stage.



28 **Figure S2.** Multiple linear regression analysis ( $R^2$ ) for the comparison between the Citrus  
29 20K microarray and qRT-PCR gene expression data for the genes listed on Supplemental  
30 Table S1.  
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