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**SUPPLEMENTARY INFORMATION**

**Effect of mosaic knockout of the plastid starch phosphorylase *NTPHO1-l1* gene on the metabolism of carbohydrates and carotenoids in *Nicotiana tabacum* L. leaves**

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**Table 1.** Sequences of primers used in the study.

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| *N. tabacum* gene (NCBI gene ID) | Primer sequence (5´→3´) |
| Amplification of the edited *NtPHO1-L1* sequence fragment | |
| *NtPHO1-L1* (LOC107810306; LOC107814807) | ATAGGAGCCAGATGCTGCTC  CAGCGTTTGCTTGGGCTTCACA |
| qRT-PCR | |
| *NtPHO1-L1* (LOC107810306; LOC107814807) | ATCTGCTTTCAATGCTGGAG  TTGCTTCAACCGAAGGATC |
| *NtPSY2* (LOC107772713; LOC107761716) | AACTGGACTCTGCTAGTAGATG  GCACAAGAGATTTTGCATAAGCA |
| *NtZDS* (LOC107772271) | CAGCAGATACGTGATTTGGAT  ACAGTCAATGAATCCAAGAGCA |
| *NtPDS* (LOC107816873) | GCTCTTCCTGCGCCATTAAATG  CTTGCTTTCTCATCCAGTCCTT |
| *NtCRTISO* (LOC107832559; LOC107791326) | ATGAAGCAAAGAAAGAGCTTGT  GCAAGGTATCGTCTATGTGTCT |
| *NtVDE* (LOC107780507; LOC107763628) | CCTGACGAAACGGAATGTCAG  AGTCACCAACATCAGATTTACGA |
| *NtSEP1* (*SEPALLATA 1-like*, LOC107776641; LOC107789627) | GCAACATGCTCAATCTCAGG  TTGGGCATTTGTTACTGCTG |
| *NtSEP2* (*NtMADS6-like*, LOC107821033; LOC107818774) | AATAATGGCGGAACAGATGG  TGGATCAGGTTCACATTCCA |
| *NtSEP3* (*SEPALLATA3 1-like*, LOC107773468; LOC107764357; JQ686934.1) | TCACTTGAGAGGCAGCTTGA  CATCGCCCTGAGTTTGAGTT |
| *NtAGL8* (LOC107777773; homolog of *Arabidopsis AGL8* [836212]) | ATCAGTGGGATCAGCAGAACCA  ACCTCCTTCCACTTCTCCATTATC |
| *NtMADS23-like* (*ANR1-like*,LOC107825287) | CAATTGGCAACTCCAACTTCTGAG  CGTCCTTTCTTACACGAACACCA |
| *actin-7* (LOC107831145) | ACAGTGTCTGGATTGGAGGATC GAAGCACTTCCTGTGGACAATG |
| *NtBAM1* (LOC107832261) | CCGGGAGAGTATAATTGGGG  ACAACCCACCTTGGAAGAGG |
| *NtBAM9* (LOC107827956, LOC107780374) | GATGGAAAGACTCCGGTTCAAG  ATGGATTGTGATGAGAAGGATAGC |
| *NtGWD* (LOC107832610, LOC107775774) | TGAGTTATGACCGTGCTATC  GACTCAAGATCTGCACCTG |
| *NtAI* (LOC107802234) | TTGTAACATGGCTCGCGTTC  TGTTGGTGAAGCACTTGGAG |
| Analysis of regenerants for the presence of the transgene and residual *Agrobacterium* infection | |
| *NPTII* | TTGTCACTGAAGCGGGAAGG  ATATCACGGGTAGCCAACGC |
| *virB* | GGCTACATCGAAGATCGTATGAATG  GACTATAGCGATGGTTACGATGTTGAC |