

Supplemental Table S1 Primers used for genes expression analysis

| Accession number | Genes | Forward primers (5'-3') | Reverse primers (5'-3') |
|------------------|--------------|-------------------------|-------------------------|
| Solyc00g500209 | <i>PsaA</i> | TTGTTTGGGCTACTGGATTTA | CAAATTGGCCAAAGGTGTG |
| Solyc00g500057 | <i>PsaB</i> | GCACATTTTCGGTCAACTCT | CACTTAGCCACGCTTCATAA |
| Solyc06g054260 | <i>PsaD</i> | ATTGGACCCAAACACACCCT | GCACTGTTCTTTCCTTGCCA |
| Solyc06g083680 | <i>PsaE</i> | AATGTTGCCTCCAACACCAC | GTGGCTTAGCAGCTTTGGTT |
| Solyc02g069450 | <i>PasF</i> | TCTTCCAGCTTCTGCTGACA | GGGCGCTATCAGGTGAGTAA |
| Solyc06g066640 | <i>PsaH</i> | AGTAGTGTCAAGGGCCTAGC | GCTTCACATTGAGGCGAGAT |
| Solyc09g064400 | <i>PsaJ</i> | ATGCGAGATCTAAA | GAATGAAAAAAGGGG |
| Solyc08g006930 | <i>PsaK</i> | TGGCTTCCACCATGATGACT | TCCCAAACCACCTTGTCTT |
| Solyc06g082940 | <i>PsaL</i> | CGGCCTTGTTACTCCCAAAG | TCAATGGGCTTGAGGTGACT |
| Solyc08g013670 | <i>PsaN</i> | CGCAAGGGCGTATACTGTTC | CTTCACACTCCAACGCCAAA |
| Solyc00g500329 | <i>PsbA</i> | GGCGTAGCTTGTTACATGGG | TGCAACAGCAATCCAAGGTC |
| Solyc00g500071 | <i>PsbB</i> | TGGGCCCACTCGTTATCAAT | TTGCCGGATTATTGCCGATG |
| Solyc00g500206 | <i>PsbC</i> | TCATGTAGCCCATGCTGGAT | ACATAGGCTTCTCGGGTACG |
| Solyc09g063130 | <i>PsbE</i> | GAACACCACCACCAACATCC | CCAATTGGAGGTGGCTTGAC |
| Solyc00g500136 | <i>PsbQ</i> | TCATGTAGCCCATGCTGGAT | ACATAGGCTTCTCGGGTACG |
| Solyc06g074200 | <i>PsbO</i> | ACTGGACCTGCTCTCACTTC | AGTCAGGCAGAGGAACAACC |
| Solyc12g094720 | <i>PsbP</i> | TCCGCCTTTACATCGATTGC | GCGCCTATTTGCCAATCACT |
| Solyc09g076030 | <i>Psb27</i> | GTGGTGAAGACATTGCGTGA | GTCCTCTCCATCCACCCAAG |
| Solyc09g064490 | <i>Psb28</i> | CTCACTTGGTGGCTTCCCTA | TAGTGGCAATCCAAGGAGCA |
| Solyc05g056050 | <i>Lhca1</i> | CAGATGGGCTATGCTTGCTG | GGCTGGCCCAAATATGTAGC |
| Solyc10g006230 | <i>Lhca2</i> | ACGGACACAACGACTCTCTT | CCGTGAGCTTGTTGTTAGGG |
| Solyc10g007690 | <i>Lhca3</i> | CACTCCACCAGTCAAGCAAG | CTAGCCATTTTCGGCTCGATG |
| Solyc12g011280 | <i>Lhca4</i> | GGCAACACAGGCATTGATCT | TGGCAGTAGCCCTTACAACA |

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| Solyc07g022900 | <i>Lhca5</i> | GCCAGTGTGGTATGAAGCAG | TGCTTGAGAGCCAGGATGAA |
| Solyc12g009200 | <i>Lhcb1</i> | TGGGACTAGGGTCTGATCCA | ACTCTCGTTCACCAGCATCA |
| Solyc07g047850 | <i>Lhcb2</i> | ACGGACACAACGACTCTCTT | CCGTGAGCTTGTTGTTAGGG |
| Solyc01g105050 | <i>Lhcb3</i> | CTCACTTCTTGGCACTCAGC | TTGTCSGAAGAAGTCGACCCA |
| Solyc09g014520 | <i>Lhcb4</i> | AAAGGCTGCGAAGAAGCAAA | ATACTCCGGTGCCTTAGCTC |
| Solyc06g063370 | <i>Lhcb5</i> | ATTTGGTGCCAACTGTGGTC | CAGCACCACCAACAAGAACA |
| Solyc01g105030 | <i>Lhcb6</i> | CATCTGCTGCAGTGCTGAAT | CACCACCTCTTACAGCAGGA |
| Solyc00g500067 | <i>PetA</i> | AGGGACGTCAAGTGGTTGAT | TCTGCATCTCCCTGACCAAA |
| Solyc00g500027 | <i>PetB</i> | TCGATGGTCGGCAAGTATGA | AGCCAGAACCACACCTGTAA |
| Solyc12g005630 | <i>PetC</i> | TTGGGTGCACTTGCTTTACC | GGTACCACCACTACCACCTC |
| Solyc00g500158 | <i>PetD</i> | AAATCCATTTTCGCCGTCCAG | AATGTTGCACCAATGCCCAA |
| Solyc01g110360 | <i>FBA1</i> | GCCATGAACCAAGCTCCAAA | GCAGCCTTCACATTCTCAGG |
| Solyc02g062340 | <i>FBA2</i> | CCATGGCACGTATCGTTCTC | CCGGTGTATTTGCCTAGTTGC |
| Solyc02g084440 | <i>FBA3</i> | TGTCGTTCTCATAACGCCAGA | ATCCTGAGCTGCCTTCACAT |
| Solyc07g065900 | <i>FBA6</i> | GCACTCAATGACCAGCATGT | TCCTCACTCTGTCTCCTGA |
| Solyc09g009260 | <i>FBA7</i> | TGAGACCACCACTCAAGGTC | CCATTTGGCGAACCTAGCAC |
| Solyc07g066610 | <i>PGK1</i> | TCGCTGATCCTCTCTTACC | TCAGCCCTGACGAAGACTTT |
| Solyc07g066600 | <i>PGK2</i> | AGCCACTTGTGCCTAGACTT | TCCAGCCACCAAGTTCTCAA |
| Solyc09g008130 | <i>PGK3</i> | GGGAGCAGAAGAAACAGCAG | AATTTGAGAAGCCGCGAGTC |
| Solyc05g052600 | <i>SBPase</i> | TCTCCAACAGCTAAGGCGAA | GGACGGATTGTTTCCCATCG |
| Solyc09g011080 | <i>RCA1</i> | GTCGATAGCTTCCCTGGACA | GCCGTAICTCGAGGAGCTTAT |
| Solyc10g086580 | <i>RCA2</i> | TGCCTCAGTGTCAACCATTG | ACGGAAGTTCCAGCAACTGA |
| Solyc03g117850 | <i>RCA3</i> | CTAGGGCTGGCGTCATTGAT | CCTAGTCACCTTCTGCCGAT |
| Solyc12g056530 | <i>FBP1</i> | GGGCACTGGACTTAGTTCCT | TCTCTTCAGCAGCATAAAGCC |
| Solyc04g071340 | <i>FBP2</i> | TACTGCGTGCCCAATCTCTT | AAGTCTCCACGGGATTCAGG |
| Solyc09g011810 | <i>FBP2</i> | CCAGGGACAAACCTTCTTGC | TCCAGAGCTGGTAGTTTCC |

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|----------------|---------------------|--------------------------|--------------------------|
| Solyc01g099620 | <i>RbohA</i> | GAGAGTAGGATTCAGCGGT | GCCTCTTTTCGAGCTTGCT |
| Solyc03g117980 | <i>RbohB</i> | AGGGAATGATAGAGCGTCG | CATCGTCATTGGACTTGGC |
| Solyc05g025690 | <i>RbohC</i> | ATGGAAAGCGGTGAGGAATAAA | AGCATTGAACCGACTCTCAAC |
| Solyc06g068680 | <i>RbohD</i> | CCTCCTACACCACCAAATC | GCCCAGTGCTTCAATCTCT |
| Solyc05g054760 | <i>DHAR</i> | CCCTGATGTCCTTGGAGACT | AAGAACCATTTGGGCTTGTC |
| Solyc08g081530 | <i>MDHAR</i> | TCCGAACAAACATACCTGGA | CGTGTGTGCAGTTAGCAATG |
| Solyc06g005160 | <i>APX</i> | GACTCTTGGAGCCCATTAGG | AGGGTGAAAGGGAACATCAG |
| Solyc12g094620 | <i>CAT</i> | TGATCGCGAGAAGATACCTG | CTTCCACGTTTCATGGACAAC |
| Solyc11g066390 | <i>SOD</i> | CTCCTGGAGATGAAATCCGT | AAGTGCTCGTCCAACAACCTG |
| Solyc08g006720 | <i>GPX</i> | GACAAGGTCGACGTGAATGG | CGTCGTTGGTGGATACCTCT |
| Solyc09g091840 | <i>GR</i> | TCTGATGCTGCCCTTGA | GCGACTCCTCGGTATGG |
| Solyc11g005330 | <i>actin</i> | TGTCCCTATTTACGAGGGTTATGC | CAGTTAAATCACGACCAGCAAGAT |
