

Table S1. Functional annotations of the identified genes.

Gene	Defined	Functional
<i>AtpH</i>	<i>ATP synthase subunit H</i>	ATP production during photophosphorylation
<i>LHCII</i>	<i>Light-Harvesting Complex II</i>	capturing and transferring light energy
<i>Lhcb</i>	<i>Light-harvesting chlorophyll a/b-binding protein</i>	major component of LHCII involved in light capture and energy transfer
<i>PsaG</i>	<i>Photosystem I subunit G</i>	photosynthetic electron transport in PSI
<i>PsaO</i>	<i>Photosystem I subunit O</i>	stabilization and function of the PSI complex
<i>PsaK</i>	<i>Photosystem I subunit K</i>	stabilization of the photosystem I complex
<i>PsbA</i>	<i>Photosystem II reaction center protein D1</i>	a core component of PSII involved in primary photochemical reactions
<i>PsbQ</i>	<i>Photosystem II oxygen-evolving enhancer protein 3</i>	stabilization of the oxygen-evolving complex during water splitting
<i>CHS</i>	<i>Chalcone synthase</i>	key enzyme in the flavonoid biosynthesis pathway
<i>C4H</i>	<i>Cinnamate 4-hydroxylase</i>	key enzyme in phenylpropanoid metabolism
<i>F3'5'H</i>	<i>Flavonoid 3',5'-hydroxylase</i>	modifies flavonoid B-ring hydroxylation
<i>FLS</i>	<i>Flavonol synthase</i>	catalyzes flavonol formation
<i>PAL</i>	<i>Phenylalanine ammonia-lyase</i>	entry enzyme of phenylpropanoid pathway
<i>CCoAOMT</i>	<i>Caffeoyl-CoA O-methyltransferase</i>	lignin monomer biosynthesis enzyme
<i>CCR</i>	<i>Cinnamoyl-CoA reductase</i>	key enzyme converting hydroxycinnamoyl-CoA to aldehydes
<i>HCT</i>	<i>Hydroxycinnamoyl transferase</i>	p-coumaroyl shikimate/quinate transferase; lignin precursor metabolism
<i>PER</i>	<i>Class III peroxidases</i>	involved in lignin polymerization and cell wall formation
<i>A-ARR</i>	<i>Arabidopsis response regulator</i>	negative regulators of cytokinin signaling
<i>AHP</i>	<i>Arabidopsis histidine phosphotransfer proteins</i>	key components of cytokinin signal transduction
<i>CYCD3</i>	<i>Cyclin D3-type proteins</i>	cell cycle regulators promoting G1/S transition
<i>JAZ</i>	<i>Jasmonate ZIM-domain proteins</i>	key repressors of the jasmonic acid (JA) signaling pathway
<i>GH3</i>	<i>Gretchen Hagen 3 family proteins</i>	auxin amido synthetases involved in auxin homeostasis
<i>PR-1</i>	<i>Pathogenesis-Related protein 1</i>	marker of salicylic acid-mediated defense response
<i>SAUR</i>	<i>Small Auxin-Up RNA proteins</i>	early auxin-responsive genes regulating cell expansion