

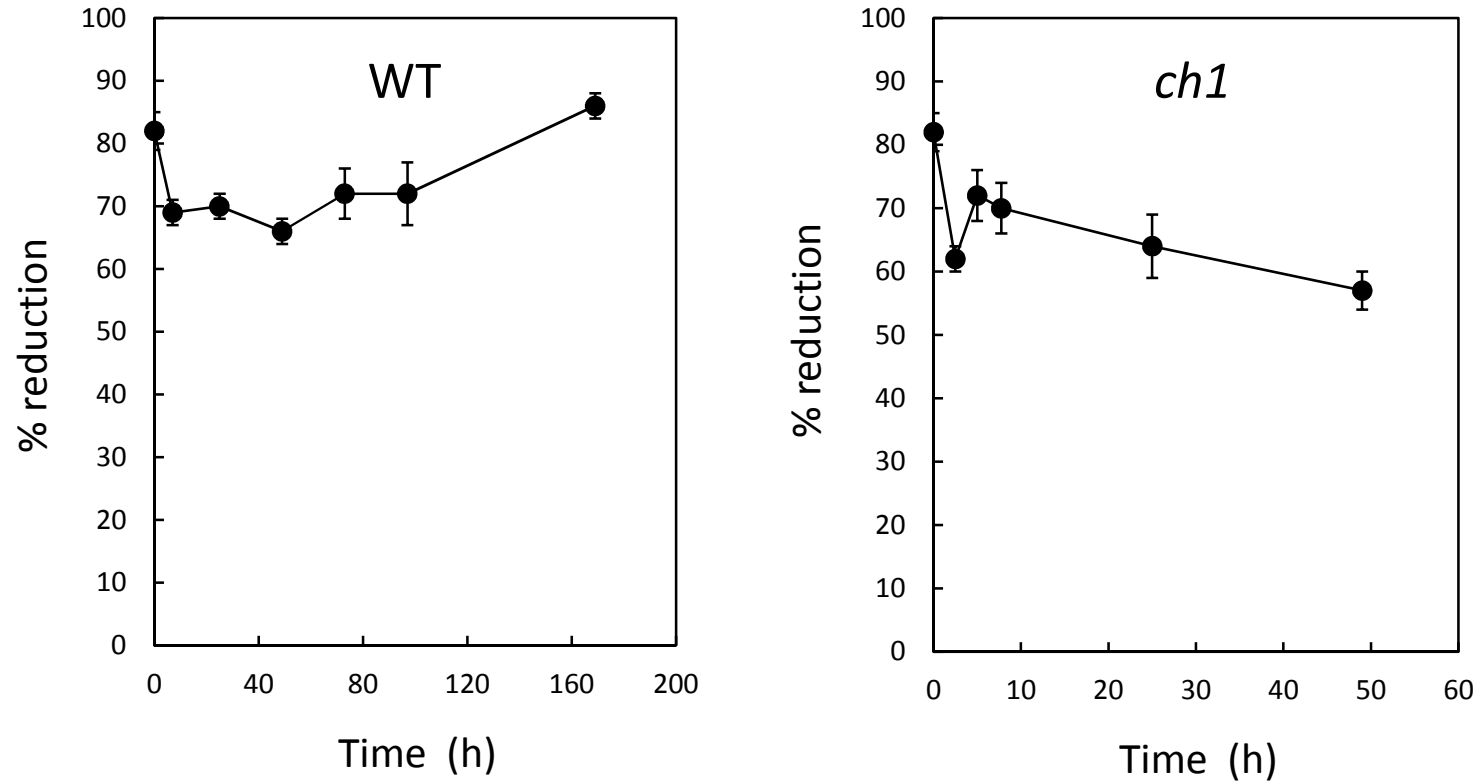
**Plant tolerance to excess light energy and photooxidative damage
relies on plastoquinone biosynthesis**

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Supplemental Table 1. List of genes and oligonucleotide primer sequences used for the gene expression analysis by qRT-PCR.

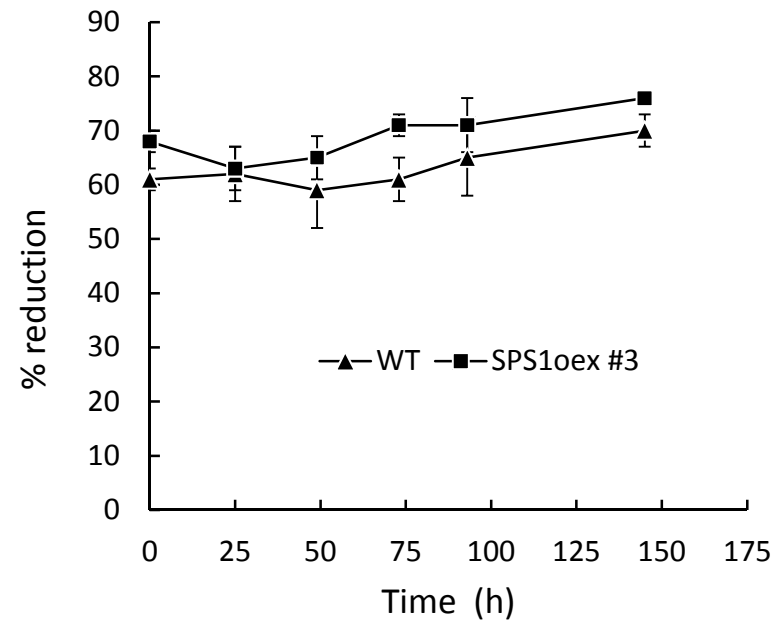
Name	Locus	Forward primer seq. (5'-3')	Reverse primer seq. (5'-3')	Length (pb)
SPS1	At1g78510	GCAAGCTTGATACACGACGA	TGGACGCCTGCTTTATCTCT	220
SPS2	At1g17050	TGATTTGCAGAGGTTGAACG	ATCTCACCTAAACGCCGATG	198
HST	At3g11950	TGCTGCAATGGTGAAAGAAG	CTTCTGGAGCTTTGGTTTCG	179
HPPD	At1g06570	CGACTTCATGCCTTCTCCTC	AAATATCGTCGGCCTGTCAC	181
VTE1	At4g32770	ACTAGTTCCCCGCTCCATTT	CTCGAAGAACTCCGAGGTG	169
VTE3	At3g63410	CCAAAGCAAAGCAAAGGAG	GCTTCCCTTATCCCCTCTG	151
ACTIN2	At3g18780	CTCTCCCGCTATGTATGTCGC	GAAACCCTCGTAGATTGGCA	124

Percentage reduction state of plastoquinone-9 in WT and *ch1* leaves



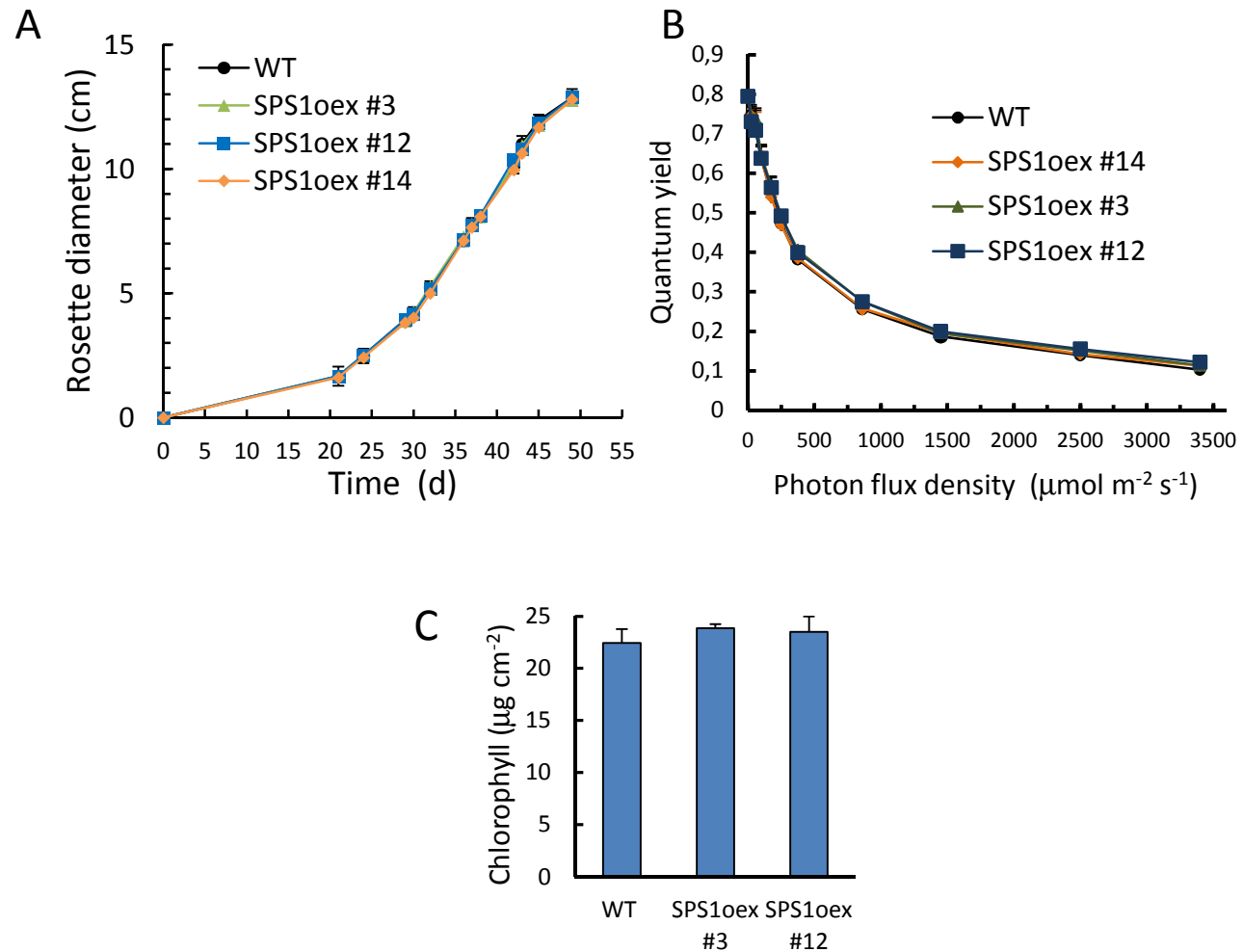
Supplementary Fig. 1: Percentage reduction state of plastoquinone-9 (ratio between reduced plastoquinone-9 and total plastoquinone x100) in WT and *ch1* Arabidopsis leaves during high light stress ($1300 \mu\text{mol m}^{-2} \text{s}^{-1}$ at 8°C).

Percentage reduction state of plastoquinone-9 in WT and SPS1oex leaves



Supplementary Fig. 2: Percentage reduction state of plastoquinone-9 in WT and SPS1oex leaves during high light stress ($1300 \mu\text{mol m}^{-2} \text{s}^{-1}$ at 8°C).

Growth and photosynthesis of WT and SPS1oex plants



Supplementary Fig. 3: A) Growth curve of WT Arabidopsis and 3 SPS1oex lines. Data are mean value of 6 measurements \pm SD. B) Quantum yield of photosynthetic electron transport ($\Delta F/F_m'$) at different PFDs. Data are mean values of 5 separate experiments + SD. C) Total chlorophyll. Data are mean values of 4 separate experiments + SD.