

Supplementary Materials

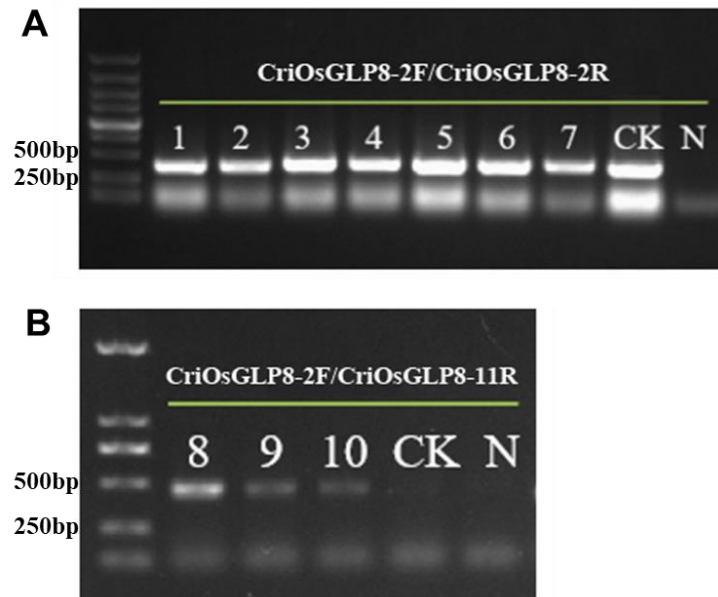


FIGURE S1 | Construction of transgenic rice lines. **(A)** Validation of *osglp8-2* mutant and **(B)** Validation of *osglp8-(2-11)* mutant. CK means control check, N means negative control.

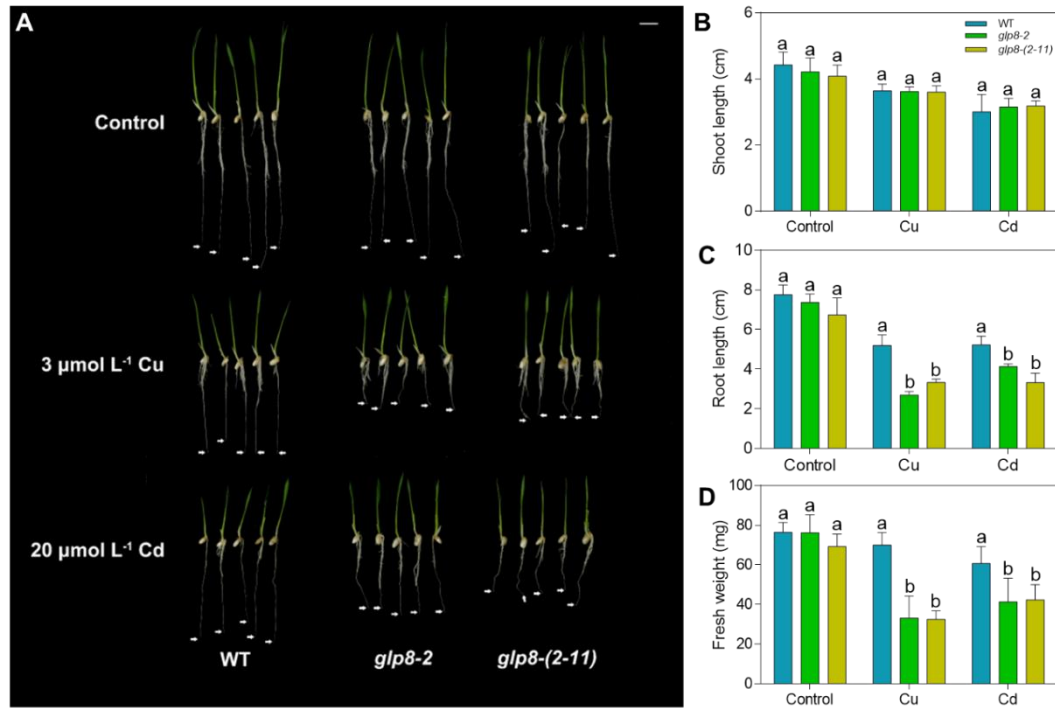


FIGURE S2 | Knockout of *OsGLPs* results in the growth inhibition of rice seedlings. **(A)** Phenotypes of 4-day-old WT and transgenic seedlings grown for 3 days under normal conditions, 3 $\mu\text{mol L}^{-1}$ CuSO_4 treatment, or 20 $\mu\text{mol L}^{-1}$ CdCl_2 treatment. Scale bar = 1 cm. **(B and C)** Root elongation of WT (wild type) and transgenic plants. **(D)** Fresh weight of WT and transgenic plants. Values are the mean \pm SD; $n = 3$. Different letters indicate a difference of $p \leq 0.05$ by the LSD test.

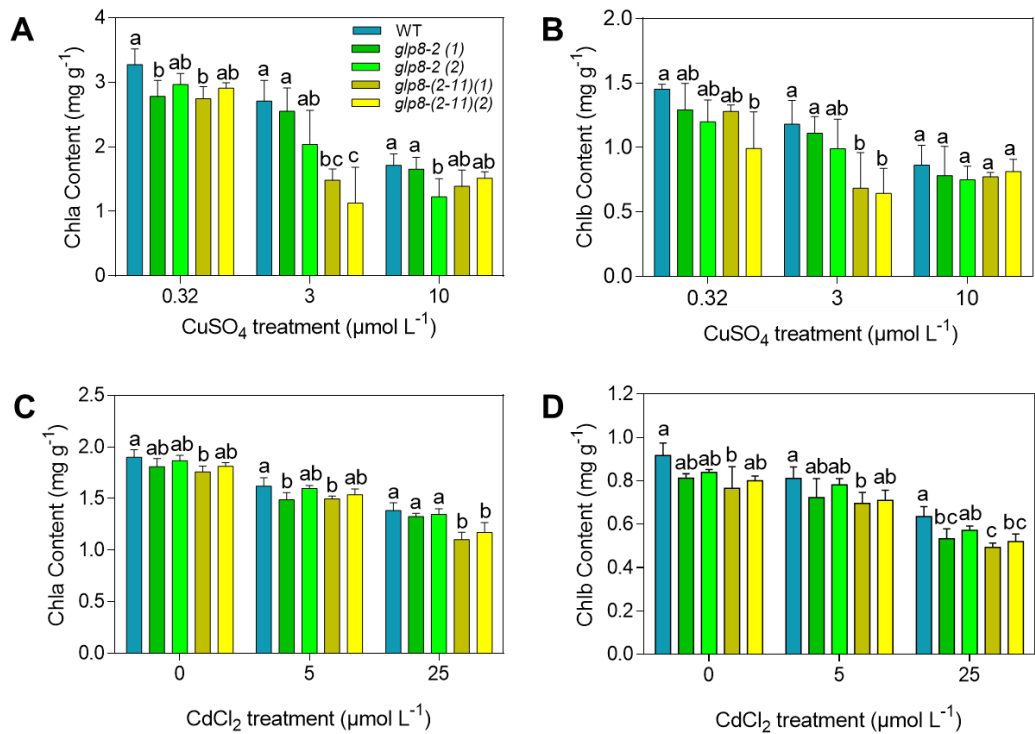


FIGURE S3 | Knockout of OsGLPs affects chlorophyll content in rice. **(A and B)** The Chla and Chlb content in the roots and shoots of two-week-old seedlings treated with 3 or 10 μmol L⁻¹ CuSO₄. **(C and D)** The Chla and Chlb content in the roots and shoots of two-week-old seedlings treated with 5 or 25 μmol L⁻¹ CdCl₂ for 5 days. Values are the mean ± SD; n = 3. Different letters indicate a difference of $p \leq 0.05$ by the LSD test.

TABLE S1 | Primers used for plasmid construction.

Primer name	Primer sequence (5'-3')
gRNA1-F	GGCATAGCCCTCTCCAAGACTTTT
gRNA1-R	AAACAAAAGTCTTGGAGAGGGCTA
gRNA2-F	GGCATCCTGCTCCTCGCCACTCTT
gRNA2-R	AAACAAGAGTGGCGAGGAGCAGGA
CriOsGLP8-2F	CATCTCAAACACACCACCTGA
CriOsGLP8-2R	AAGACATTGACCAAAGTGA
CriOsGLP8-11F	CATCTCAAACACACCACCTGA
CriOsGLP8-11R	TTGCTGCCTTGAAGAAGTGAT
OsGLP8-2OE-F	GTGTTACTTCTGCAGGGTACCATGGCTTCACCATCTTCCTTCT
OsGLP8-2OE-R	ATAACGCGTACTAGTAAGCTTTTAGTAGTGGTTGTTCTCCCAA

TABLE S2 | Primers used for quantitative real-time PCR analysis.

Primer name	Primer sequence (5'-3')
<i>ACTIN1-F</i>	TATGCTCTCCCCCATGCTATC
<i>ACTIN1-R</i>	CCGTTGTGGTGAATGAGTAACC
<i>OsGLP8-2F</i>	AGGCAGCCATGCTCGATAAG
<i>OsGLP8-2R</i>	GGGTGCAAAGTCAAGACGTG
<i>OsGLP8-3F</i>	TGTGCATCCTCGTGCTACTG
<i>OsGLP8-3R</i>	ACCCTTATGCACCACCTTGG
<i>OsGLP8-5F</i>	ACCTGTGCGTGTCAATGGAT
<i>OsGLP8-5R</i>	ACGTTGGACCCAACCTTGTT
<i>OsGLP8-7F</i>	GGCTTCACCATCTTCCTTCTGC
<i>OsGLP8-7R</i>	TGAGTGCTTATCGGCAACGC
<i>OsGLP8-11F</i>	ACTCACCTGCAGTGCTTGTC
<i>OsGLP8-11R</i>	TGTTTCGTCTTCCGAGGAGTG
<i>PAL-F</i>	ACACAACCTCCTCCACCTCCATCG
<i>PAL-R</i>	GCTCCTCCGCCGCCTTCC
<i>C4H-F</i>	GCACGCCATACTACACCAGAC
<i>C4H-R</i>	GTCGTCGTTGCCGCTCATC
<i>4CL-F</i>	CGACCGCCACGACCTCTC
<i>4CL-R</i>	GCCCTGCCTCCGTCATCC
<i>CCoAoMT-F</i>	CACCAACAAGACGCTGCTCAAG
<i>CCoAoMT-R</i>	CTCATCCGCCGACGACTGC