

**Supplementary Table S1.** Summary of the Analysis of Variance (ANOVA) for leaf chlorophyll content between yellow and normal genotypes at each stage of sampling from S0 through S3.

Stage	Estimated difference between G vs. Y	Standard error	P- value
S0 (14D)	16.468	1.96	0.0002
S1 (21D)	15.600	1.28	<0.0001
S2 (28D)	6.917	2.82	0.0495
S3 (36D)	-0.008	4.27	0.9985

**Supplementary Table S2.** Chlorophyll content of other ALS resistant genotypes showing variability for leaf color were grown alongside with the two sister lines measured at S0 and S3 stage.

Genotype	SPAD Units	
	S0	S3
MN13-7450G	40.4	57.2
MN07-2118Y	29.7	55.0
MN13-7458G	35.9	54.7
MN13-7838Y	29.6	59.3
PR12/13-763-3Y	28.4	55.0
PR11/12-1026G	34.6	58.7

**Supplementary Table S3.** Genes and primers used for qRT-PCR. The expression results for all genes were consistent between the RNA-seq and qRT-PCR analyses.

Gene ID	Forward Primer	Reverse Primer	Result*
Sb01g029900	GACAAGATGATCTCAACCA	CTACCCTATCGGACACAT	Up
Sb02g012300	ATGGGCGAGGATGAAGAT	ACAGGGTCCAGTATGGTT	UP
Sb03g046660	ATCTCAAAGCCTGGAAAGC	AGCAGACATGGAGTTGGT	Up
Sb03g033050	GTAGATTTGGAGAACAAGAAG	AACTTCACCTTGGAGATG	NS
Sb02g009740	AATAAGGAGATGATTGGTAA	AAATGACAGATTGGGTTT	NS
Sb04g020480	TTCTTGGTGGATTGTTGA	GAGTTGGTAGATGCTGATA	NS
Sb01g036550	TAATCTGAATGCCGTTGA	CTTGAAGAACAATCTGGTT	NS

\*Up = Significantly up-regulated in yellow genotype, NS = Not significantly different between yellow and green genotypes.