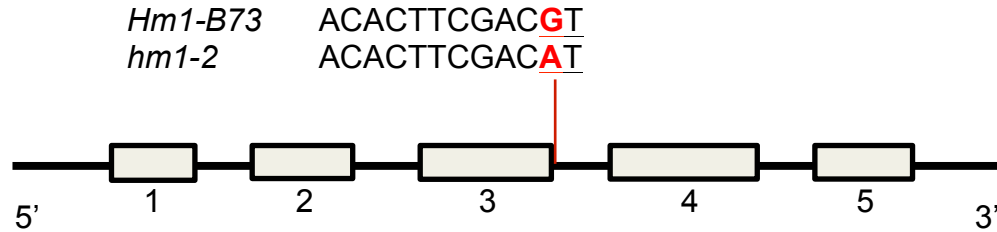


S3 Fig. Null allele *hm1-2* identified in B73-EMS M₂ population. (A) Ethyl methanesulfonate (EMS) mutagenesis caused a G to A substitution at the junction of exon3/intron3. (B) Predicted protein sequence of *hm1-2* is 176 amino acids similar to HM1^{B73} and the mutation in the intron is predicted to generate 26 different amino acids before resulting in a truncated protein.

A



B

Hm1-B73	MAEKESNGVRVCVTGGAGFIGSWLVRKLLLEKGYTVHATLRNTGDEAKAGLLRRLVPGAAE	60
hm1-2	MAEKESNGVRVCVTGGAGFIGSWLVRKLLLEKGYTVHATLRNTGDEAKAGLLRRLVPGAAE	60

Hm1-B73	RLRLFQADLFDAATFAPAIAGCQFVFLVATPFGGLDSAGSQYKSTAEAVVDAVRAILRQCE	120
hm1-2	RLRLFQADLFDAATFAPAIAGCQFVFLVATPFGGLDSAGSQYKSTAEAVVDAVRAILRQCE	120

Hm1-B73	ESRTVKRVIHTASVAAASPLLEEEVSASGVGYRDFIDESCWTSLNVDYPLRSAHFDKYIL	180
hm1-2	ESRTVKRVIHTASVAAASPLLEEEVSASGVGYRDFIDESCWTSLNVDYPLRSAHF DISSI	180
	***** :	
Hm1-B73	SK-----LRSEQELLSYNGGESPAFEVVTLPLGLVAGDTVLRAPETVESAVAPVSRS	233
hm1-2	QAKLLLISELERLITLIFFS-----	200
	. * . * : : .	
Hm1-B73	EPCFGLLRILQQLLGSPLVHVDDVCDALVFCMERRPSVAGRFLCAAAYPTIHDVVAHYA	293
hm1-2	-----	200
Hm1-B73	SKFPHLDILKETEA VATVRPARDRLGELGFKYKYGMEEILDSSVACAARLGS LDASKLGL	353
hm1-2	-----	200
Hm1-B73	QKG	356
hm1-2	---	200