

**Table S7. Primers used for fine mapping, direct sequencing and transgene in this study**

Name	Direction	Sequence (5' - 3')	Purpose
FM08	Forward	CTGTGCCATCCACCCAACAACGT	Fine mapping
	Reverse	GTGACAGTGTTAGCGTCTCTGGGG	Fine mapping
FM09	Forward	AACCGCTGTATACTCATAAGCGT	Fine mapping
	Reverse	CACAAAAGCTCAAGATGGAAGTCA	Fine mapping
FM10	Forward	TCTCCATTCACATATCGTGCATTGC	Fine mapping
	Reverse	AGCAACTTGTGTTCTCATTCTC	Fine mapping
FM11	Forward	CGAGAAAACACTACGCACGTACCA	Fine mapping
	Reverse	CCAAGTTTATTGTTTCAGCGAGA	Fine mapping
FM12	Forward	CATAAGTCTTCTACAGTTACGGT	Fine mapping
	Reverse	GAAATCAAACATTTAACATGTCT	Fine mapping
GA5_A	Forward	TGATGAAACCCCAAGATG	Sequencing GA5
	Reverse	GGCGTAAAACGGGACTAC	Sequencing GA5
GA5_B	Forward	AATGAGGTCCTGTTCTAG	Sequencing GA5
	Reverse	TCAAACCTCCGTTAATCTTC	Sequencing GA5
GA5_C	Forward	TGGAGGATGGATCAGAGAGA	Sequencing GA5
	Reverse	TTTAATATGCAACTACGTAA	Sequencing GA5

GA5_Col-0	Forward	CGGGATCC AGTTGTTAGTACTTCTTTGTCCCAGGA	Cloning GA5_Col-0
	Reverse	AACTGCAGAGACCCAACTACAGAAACAAGACCACA	Cloning GA5_Col-0
GA5_CT	Forward	CTCCTGAGGAAGAAGACAAA	Transgene validation
	Reverse	AGTGGAGGATGGATCAGAGA	Transgene validation