

**Table S8. Oat-maize addition line (OMA) markers used to anchor centromere 5 BAC clones.** Mapping primers were designed on genic, non-genic single copy or non-genic low copy sequences. Two PCRs were performed for each primer pair, one using OMA-5 and a second using B73 genomic DNA, and amplicons were sequenced in both directions. In all cases the sequences derived from B73 and OMA-5 genomic DNA were identical. Primer c05-08-3-f-1 was replaced with primer c05-08-3-f-2 (AGGCAGATATGGCACCTGTC) for sequencing because of poor sequence quality obtained with the former.

MarkerName	BAC Accession Number	Start	End	Product size	Primer ID	Primer sequence	Primer type
OMA_5.01	AC207875.2	133787	134006	220	c05-01-2-f-1	CCGTAATCTGCTGCACTTCA	Non-genic single copy
					c05-01-2-r-1	CGATCATCACCAGACCAATG	Non-genic single copy
OMA_5.02	AC207875.2	95373	95717	345	c05-01-1-f-1	CTAGCAAGGATGGCTCTTGG	Non-genic single copy
					c05-01-1-r-1	AGTGACCGAGCTCCAACCTC	Non-genic single copy
OMA_5.03	AC197005.3	51436	52182	747	c05-02-2-f-1	ATTGCAAGTTCTGGGAGCTG	Genic
					c05-02-2-r-1	TACCCGGATGGAATGACAAT	Non-genic single copy
OMA_5.04	AC197005.3	51454	52182	729	c05-02-2-f-2	TGGACACCGATCATGACTTC	Genic
					c05-02-2-r-1	TACCCGGATGGAATGACAAT	Non-genic single copy
OMA_5.05	AC182837.4	154823	156318	1496	c05-08-3-f-1	GCTGTGCAGCTTTTAGCACA	Non-genic low copy
					c05-08-3-r-1	TTGGATGAAATTCACCGTCA	Non-genic low copy
OMA_5.06	AC196438.3	95667	96207	541	c05-10-2-f-1	GTTTCCCTGGTGCATACGAC	Genic
					c05-10-2-r-1	CAAGCAATTGAAGGACACGA	Non-genic single copy
OMA_5.07	AC196438.3	95667	96248	582	c05-10-2-f-1	GTTTCCCTGGTGCATACGAC	Genic
					c05-10-2-r-2	CGCCGTCTTCACTTTTAGGA	Non-genic single copy
OMA_5.08	AC196144.3	95168	96044	877	c05-21-2-f-1	CTCGTCCGTGGAAAAATCC	Non-genic single copy
					c05-21-2-r-1	GAGGGAGGGAGAGAAACAGC	Genic
OMA_5.09	AC196144.3	95387	96044	658	c05-21-2-f-2	CGTTCCTCAATTCAGCAGTC	Non-genic single copy
					c05-21-2-r-1	GAGGGAGGGAGAGAAACAGC	Genic
OMA_5.10	AC182108.3	122183	122511	329	c05-24-2-f-1	TCGTGTCCAAGTCTCATTGG	Non-genic single copy
					c05-24-2-r-1	TGGATACGTCACATGCTTTCT	Non-genic single copy

Table S8 - continued

MarkerName	BAC Accession Number	Start	End	Product size	Primer ID	Primer sequence	Primer type
OMA_5.11	AC182108.3	43393	43565	173	c05-24-3-f-1	GCATCATTAGAAGCGGAAGC	Non-genic single copy
					c05-24-3-r-1	CACTTTCGGTCCATTCTGCT	Non-genic single copy
OMA_5.12	AC216805.3	20707	20107	601	Chr5R_1_F	TAGCATTCTGCCCTGCTTT	Genic
					Chr5R_1_R	TGACAAATCCTAATGGTGGGATA	Genic
OMA_5.13	AC216805.3	7458	6489	970	Chr5R_2_F	ACAGTGGTTGGTCCTCCAAG	Genic
					Chr5R_2_R	ACCCTCCAATCAGTGCATTC	Genic
OMA_5.14	AC202102.4	42835	42059	777	Chr5R_3_F	CAGTAAGCATGCACCGACAT	Genic
					Chr5R_3_R	ACAAATTTCCGATGGTTGGA	Genic
OMA_5.15	AC217238.3	38995	38743	253	Chr5R_4_F	GAATTGGTCTTAACCCGAGGA	Genic
					Chr5R_4_R	TCGACTTCTCCACCATCTCC	Genic