S-Table 1 Barley and wheat primers used for polymorphism markers analysis. The number of polymorphic scorable PCR products is listed for each primer. The primers with more than one polymorphic product in the barley TX9425/Franklin population are in red colour, while the primers having more than one polymorphic product in the wheat Ernie/Batavia population are highlighted yellow

Barley primers	Polymorphicin TX9425/Franklin	Polymorphic in Ernie/Batavia	Forward primer	Reverse primer	References
Bmac0067	1	*	AACGTACGAGCTCTTTTTCTA	ATGCCAACTGCTTGTTTAG	Ramsay et al. 2000
Bmac0209	1	*	CTAGCAACTTCCCAACCGAC	ATGCCTGTGTGTGGACCAT	Ramsay et al. 2000
Bmag 0225	*	2	AACACACCAAAAATATTACATCA	CGAGTAGTTCCCATGTGAC	Ramsay et al. 2000
Bmag0482	*	2	TATATGTCGGGAGAGATCAAG	ATAGTTTAGCCCTCCACTAGC	Ramsay et al. 2000
Bmag0122	*	1	AGGGAGGATTAATCACGG	AAGATGTGATGATCATTGTATTG	Ramsay et al. 2000
Bmag0877	1	*	AAAGCTCATGGTAGATCAAGA	TAGTTTTCCCAAAAGCTTCTA	Ramsay et al. 2000
Bmag0013	1	*	AAGGGGAATCAAAATGGGAG	TCGAATAGGTCTCCGAAGAAA	Ramsay et al. 2000
HVM27	3	1	GGTCGGTTCCCGGTAGTG	TCCTGATCCAGAGCCACC	Ramsay et al. 2000
HVM33	1	1	ATATTAAAAAAGGTGGAAAGCC	CACGCCCTCTCCCTAGAT	Ramsay et al. 2000
HVM44	1	1	AAATCTCAGGTTCGTGGGCA	CCACGGAGACCACCTCACTT	Ramsay et al. 2000
HVM60	*	1	CAATGATGCGGTGAACTTTG	CCTCGGATCTATGGGTCCTT	Ramsay et al. 2000
bPb-4747	*	*	GGGAACGACATTTACGGAGA	TAAGGTTGAGGCAGTTGCAC	Developed in this study
bPb-0079	2	4	AGGCGGTGAATAACTGGAAC	GCGGTGAACTTGGAACAGAT	Developed in this study
bPb-1183	2	1	TCTGCTCAGTAGGGCATCCT	GTTGAACGGCATGGAAGTTT	Developed in this study
bPb-6722	2	*	GCAGGCTGTGTCTTCCTTTC	GCATCGGCATGTTTCTTCTT	Developed in this study
K03692	*	*	AACTCGAATCAGATCAGCCC	CTCTCCCTCCCACTCCTTTC	Sato et al. 2009
K03336	*	*	CGTCTTGTGTCGTGTCTCGT	AGCGGCAGTAGCTTGGTAAA	Sato et al. 2009
K03504	*	1	GGAGAGACGGCAGATTTGAG	GTGTACACCGTCTTCTCCGC	Sato et al. 2009
K00892	*	*	CCGCTAGTGTGGCTGAATTT	CAAAAGCTTGGTGAAGGAGC	Sato et al. 2009
K03426	*	*	GGAGACTGGATGCGTATGAGA	GATGCACAGGGAACGAAGTT	Sato et al. 2009
K02692	*	*	CTCTGCTGTTTCGTGGATCA	TGATGACATTATCGCCCAGA	Sato et al. 2009
K03164	*	*	TGACACCGAAAACCATTTGA	TCAGGGAGCTGACGAAGACT	Sato et al. 2009
K03296	1	*	ATGTTCACCTGACGAAAGCC	CAGCTCTTACTGCCCCAAAG	Sato et al. 2009
K02534	2	1	GAGGCAAGCAGCAATACACA	TTTGTGACGGCTTACACCAC	Sato et al. 2009
K00354	2	1	TATACCAGCGCTGCACTTTG	ACCCAAACGCAAACAGACTC	Sato et al. 2009
K00933	1	1	AAATGCTCCAGTTGACAGGC	CGGCACTGAACATTCTGCTA	Sato et al. 2009
K00662	3	1	TAGCCTGGCAGCTTTCTGTT	CTACTTCCCCCGTTTCGAC	Sato et al. 2009
K00077	1	1	ACCAGTTCGCATCATCACAA	GTCCCTGACGTCAACCAGAT	Sato et al. 2009
K02538	1	2	GGCATCGTGATGACGTACAG	TCCGCCTGTCAGTCTTTCTT	Sato et al. 2009

Continuing S-Table 1

Barley primers	Polymorphicin TX9425/Franklin	Polymorphic in Ernie/Batavia	Forward primer	Reverse primer	References
K00688	3	*	TTTGTTGGTGCATTTCCTGA	CGACTTTGTGAGCACCGATA	Sato et al. 2009
K00088	1	1	ACACGGTCCATGGAAGAAAC	CATAGATGGGCCCTTGAAGA	Sato et al. 2009
GMS116	*	2	GAAAGACTGACAGGCGGAAG	TTTCTTTGTTGTGTGTGCAGTG	Ramsay et al. 2000
gwm0181	2	*	TCATTGGTAATGAGGAGAGA	GAACCATTCATGTGCATGTC	Somers et al. 2004
gwm0547	*	*	GTTGTCCCTATGAGAAGGAACG	TTCTGCTGCTGTTTTCATTTAC	Somers et al. 2004
gwm114	1	1	ACAAACAGAAAATCAAAACCCG	ATCCATCGCCATTGGAGTG	Somers et al. 2004
gwm155	2	1	CAATCATTTCCCCCTCCC	AATCATTGGAAATCCATATGCC	Somers et al. 2004
gwm340	2	1	GCAATCTTTTTTCTGACCACG	ACGAGGCAAGAACACACATG	Somers et al. 2004
gwm247	1	1	GCAATCTTTTTTCTGACCACG	ATGTGCATGTCGGACGC	Somers et al. 2004
gwm299	1	3	ACTACTTAGGCCTCCCGCC	TGACCCACTTGCAATTCATC	Somers et al. 2004
gwm285	4	*	ATGACCCTTCTGCCAAACAC	ATCGACCGGGATCTAGCC	Somers et al. 2004
wmc687	3	*	AGGACGCCTGAATCCGAG	GGGAGCGTAGGAGGACTAACA	Somers et al. 2004
wmc0471	1	*	GGCAATAATAGTGCAAGGAATG	GCCGATAATGGGCAATATAAGT	Somers et al. 2004
wmc261	*	*	GATGTGCATGTGAATCTCAAAAGTA	AAAGAGGGTCACAGAATAACCTAAA	Somers et al. 2004
wmc274	2	*	AAGCAAGCAGCAAAACTATCAA	GAATGAATGAATGAATCGAGGC	Somers et al. 2004
wmc0291	*	*	TACCACGGGAAAGGAAACATCT	CACGTTGAAACACGGTGACTAT	Somers et al. 2004
wmc0777	*	*	GCCATCAAGCGGATCAACT	GTAGCGCCCTGTTTCACCTC	Somers et al. 2004
wmc0078	*	*	AGTAAATCCTCCCTTCGGCTTC	AGCTTCTTTGCTAGTCCGTTGC	Somers et al. 2004
cfp 1822	1	1	TCTCCCTGCCTAGCCCCC	CACCTCCCATCCCCTCTTATCAC	Somers et al. 2004
cfp 2012	*	*	GCGTCAAACCACTAATGTCGCTG	GGAAGAGAGGAGGAAGAAGAGGG	Somers et al. 2004
cfp 3019	*	*	GGAGGAGGAGGTGGTTGTAGG	CCGGGACTAATGGGCTGGAC	Somers et al. 2004
cfa 2153	*	*	TGCCTAAATCTAAATGCCCG	GGATAATGTGCATGTTCACCG	Somers et al. 2004
cfd0223	*	*	AAGAGCTACAATGACCAGCAGA	GCAGTGTATGTCAGGAGAAGCA	Somers et al. 2004
cfp1037	2	*	ACCACCGTCGTGCTCTAAAAAG	CCAACCCATGCTACTGCTAACC	Paux et al. 2008
Barc0068	2	1	CGATGCCAACACACTGAGGT	AGCCGCATGAAGAGATAGGTAGAGAT	Somers et al. 2004
Bmac0035	*	*	GCGGTGTGCATGCTTGTCGTGTAGGAGT	GCGTAGTGTAGTATGTGGCCCGATTATT	Somers et al. 2004
gpw1108	*	2	TGCAAGTGCTCTTAGAATCTGAAC	TCTTGAACCTGAACCCTTGC	Somers et al. 2004
gpw4513	2	3	GCGAGGAGGAGTCCGATT	TCTGTCCTTGTATCTTCCCTCC	Somers et al. 2004
gpw7088	*	*	GCGAGAGCGTTAGCACACAA	ACATGAAGCTGGCGTGGTT	Somers et al. 2004
gpw8238	*	*	GGAGAGGTTGGGGAAGACTC	CATGGGCTGTAGGGATGTG	Somers et al. 2004