

COS Marker T0774, Chromosome VI, 18.0 cM

Brenda Esperanza Garcia Contreras and Douglas P. Maxwell
University of Wisconsin-Madison

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Primers:

Table 1: PCR Primers on Chr. 6

Primer name	Sequence (5' to 3')
TO774F2	CTGGAAGAACTAGAAATAAAGG
TO775R2	CAGTACAAGGATATCCCATTTCCTCATG

PCR at 53 C, (TGEN53), partial sequence

SEQ Gh25-6, 602 bp

ORIGIN

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1 CTGGAAGAAA CTAGAAATAA AGGGGTGGTG CTCGCCCTAT ATGAAGCTTT GAGCTCACGT
61 GACGTTGACA AGGTCCAGAA ACTTCTGGCC TCTGACCTTG AGTGGTGGTT CCATGGTCCA
121 CCTTCACATC AATTTTTGAT GCGCATACTA ACTGGTACTG CCAACTCCGA TCACTATTTT
181 TTCAAATTCA TTCCTCAAAG TATTGACGCC TTTGGATCTA CTGTCCTTGT CGAAGGTTGC
241 GATCCTGATC ACTCTATTAC TTGGGTTTAC GCTTGGACTG TTAATGATGG GATAATTACT
301 CAGGTTAGGG AGTATTTCAA TACCTCTCTC ACTGTCACTC GACTTGACAA TAGCAATAAT
361 AATAATAAATT GCCCTAAATC GGATTTGTCT TCCATTGCTG CTACACGGCA TTGCCCTTCT
421 CTTTGGGAGA GTAGTTTACC TAATCGGGTG GGTAAGTCGG TTCCGGGTCT TGTTCCTTGT
481 CTCTGAGTTC CGCGAGGATG TAAGTTTTTA ACGGTTGATT TGGGGTTTTT CGTCGCATTG
541 TTTTA
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SEQ *S. chilense* LA1932, 596 bp

ORIGIN

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1 CTGGAAGAAA CTAGAAATAA AGGGGTGGTG CTCGCCCTAT ATGAAGCTTT GAGCTCACGT
61 GACGTTGACA AGGTCCAGAA ACTTCTGGCC TCTGACCTTG AGTGGTGGTT CCATGGTCCA
121 CCTTCACATC AATTTTTGAT GCGCATACTA ACTGGTACTG CCAACTCCGA TCACTATTTT
181 TTCAAATTCA TTCCTCAAAG TATCGACGCC TTTGGATCTA CTGTCCTTGT CGAAGGTTGC
241 GATCCTGATC ACTCTATTAC TTGGGTTTAC GCTTGGACTG TTAATGATGG GATAATTACT
301 CAGGTTAGGG AGTATTTCAA TACCTCTCTC ACTGTCACTC GACTTGACAA TAGTAATAAT
361 AATAATAATA ATAATTGCC TTTCATCGGAT TTGTCTTCCA TTGCTGCTAC ACGGCATTGC
421 CCTTCTCTTT GGGAGAGTAG TTTACCTAAT CGGGTCGGTA AGTCGGTTCC GGGTCTTGT
481 CTCGCTCTCT GAGTTCGCC AGGATGTAAG TTTAACGGTT GATTTGGGGG TTTTCGTTAA
541 TTTTATTATC TTCAATTTTA ATTTGGGGCC ATGAGGAATG GGATATCCTT GTACTG
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SEQ Purple Russian, 602 bp

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1   CTGGAAGAAA CTAGAAATAA AGGGGTGGTG CTCGCCCTAT ATGAAGCTTT GAGCTCACGT
61  GACGTTGACA AGGTCCAGAA ACTTCTGGCC TCTGACCTTG AGTGGTGGTT CCATGGTCCA
121 CCTTCACATC AATTTTTGAT GCGCATACTA ACTGGTACTG CCAACTCCGA TCACTATTTT
181 TTCAAATTCA TTCCTCAAAG TGTTGACGCC TTTGGATCTA CTGTCCTTGT CGAAGGTTGC
241 GATCCTGATC ACTCAATTAC TTGGGTTTAC GCTTGGACTG TTGATGATGG GATAATTACT
301 CAGGTTAGGG AGTATTTCAA TACCTCTCTC ACAGTCACTC GACTTGACAA TAGTAATAAT
361 AATAATAATT GCCCTTCATC GGATTTGTCT TCCATTGCTG CTACACGGCA TTGCCCTTCT
421 CTTTGGGAGA GTAGTTTACC TAATCGGGTG GGTAAGTCGG TTCCGGGTCT TGTTCCTCGCT
481 CTCTGAGTTC CGCCAGRATG TAAGTTTTTA ACGGTTGATT TGGGGGTTTT CGTCGCATTG
541 TTTTGATTTT ATTATCTGCA ATTTTAATTT GGGACCATGA GGAATGGGAT ATCCTTGTAC
601 TG

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Alignment: 100a = Gh25-6, LA1932, Purple Russian

NAMES: 100a, LA1932, Purple Russian

ORIGIN

100aF2-R2	CTGGAAGAACTAGAAATAAAGGGGTGGTGCTCGCCCTATATGAAGCTTTGAGCTCACGT	60
LA1932TO774F2-R2	CTGGAAGAACTAGAAATAAAGGGGTGGTGCTCGCCCTATATGAAGCTTTGAGCTCACGT	60
Purple_russianF2	CTGGAAGAACTAGAAATAAAGGGGTGGTGCTCGCCCTATATGAAGCTTTGAGCTCACGT	60
Consensus	ctggaagaaactagaaataaaggggtggtgctcgccctatatgaagctttgagctcacgt	
100aF2-R2	GACGTTGACAAGGTCCAGAAACTTCTGGCCTCTGACCTTGAGTGGTGGTTCCATGGTCCA	120
LA1932TO774F2-R2	GACGTTGACAAGGTCCAGAAACTTCTGGCCTCTGACCTTGAGTGGTGGTTCCATGGTCCA	120
Purple_russianF2	GACGTTGACAAGGTCCAGAAACTTCTGGCCTCTGACCTTGAGTGGTGGTTCCATGGTCCA	120
Consensus	gacgttgacaaggtccagaaacttctggcctctgaccttgagtgggtggttccatgggtcca	
100aF2-R2	CCTTCACATCAATTTTTGATGCGCATACTAACTGGTACTGCCAACTCCGATCACTATTTT	180
LA1932TO774F2-R2	CCTTCACATCAATTTTTGATGCGCATACTAACTGGTACTGCCAACTCCGATCACTATTTT	180
Purple_russianF2	CCTTCACATCAATTTTTGATGCGCATACTAACTGGTACTGCCAACTCCGATCACTATTTT	180
Consensus	ccttcacatcaatTTTTgatgcgcatactaaactgggtactgccaaactccgatcactatTTT	
100aF2-R2	TTCAAATTCATTCTCAAAGTATGACGCCTTTGGATCTACTGTCCCTGTGCGAAGGTTGC	240
LA1932TO774F2-R2	TTCAAATTCATTCTCAAAGTATGACGCCTTTGGATCTACTGTCCCTGTGCGAAGGTTGC	240
Purple_russianF2	TTCAAATTCATTCTCAAAGTATGACGCCTTTGGATCTACTGTCCCTGTGCGAAGGTTGC	240
Consensus	ttcaaattcatttctcaaagt t gacgcctttggatctactgtccctgtgCGAAGGTTgc	
100aF2-R2	GATCCTGATCACTCTAATTACTTGGGTTACGCTTGGACTGTTAATGATGGGATAATTACT	300
LA1932TO774F2-R2	GATCCTGATCACTCTAATTACTTGGGTTACGCTTGGACTGTTAATGATGGGATAATTACT	300
Purple_russianF2	GATCCTGATCACTCAATTACTTGGGTTACGCTTGGACTGTTGATGATGGGATAATTACT	300
Consensus	gatcctgatcactc attacttgggttacgcttggactgtt atgatgggataattact	
100aF2-R2	CAGGTTAGGGAGTATTTCAATACCTCTCTCACGTGCTACTCGACTTGACAATAGCAATAAT	360
LA1932TO774F2-R2	CAGGTTAGGGAGTATTTCAATACCTCTCTCACGTGCTACTCGACTTGACAATAGTAATAAT	360
Purple_russianF2	CAGGTTAGGGAGTATTTCAATACCTCTCTCACAGTCACTCGACTTGACAATAGTAATAAT	360
Consensus	caggttaggagatatttcaatacctctctcac gtcactcgacttgacaatag aataat	
100aF2-R2	AATAATAAT.....TGCCCTAATCGGATTTGTCTTCCATTGCTGTACACGGCATTGC	414
LA1932TO774F2-R2	AATAATAATAATAATTGCCCTTCATCGGATTTGTCTTCCATTGCTGTACACGGCATTGC	420
Purple_russianF2	AATAATAAT.....TGCCCTTCATCGGATTTGTCTTCCATTGCTGTACACGGCATTGC	414
Consensus	aataataat tgcctc atcgatttgtcttccattgctgtacacggcattgc	
100aF2-R2	CCTTCTCTTTGGGAGAGTAGTTTACCTAATCGGGTGGGTAAGTCGGTTCCGGGTCTTGT	474
LA1932TO774F2-R2	CCTTCTCTTTGGGAGAGTAGTTTACCTAATCGGGTGGGTAAGTCGGTTCCGGGTCTTGT	480
Purple_russianF2	CCTTCTCTTTGGGAGAGTAGTTTACCTAATCGGGTGGGTAAGTCGGTTCCGGGTCTTGT	474
Consensus	ccttctctttgggagagtagtttacctaatacgggt ggtaagtcggttccgggtcttgtt	

100aF2-R2	CTTGCTCTCTGAGTTC	CGC	GAGGATGTAAGTTTT	TTAACGGTTGATTTGGGGGTTTT	CGTC	534	
LA1932TO774F2-R2	CTCGCTCTCTGAGTTC	CGCC	GAGGATGTAAGTTT	.AACGGTTGATTTGGGGGTTTT	CGT.	537	
Purple_russianF2	CTCGCTCTCTGAGTTC	CGCC	GAGGATGTAAGTTTT	TTAACGGTTGATTTGGGGGTTTT	CGTC	534	
Consensus	ct gctctctgagttccgc ag atgtaagttt aacggttgatttgggggTTTTcgt						
100aF2-R2	GCATTGTTTT	A	ATTTTATTATCTG	CAATTTTAATTTGGG	A	CCATGAGGAATGGGATATCC	594
LA1932TO774F2-R2	T	AATTTTATTATCT	CAATTTTAATTTGGG	G	CCATGAGGAATGGGATATCC	588
Purple_russianF2	GCATTGTTTT	T	AATTTTATTATCTG	CAATTTTAATTTGGG	A	CCATGAGGAATGGGATATCC	594
Consensus	t attttattatct caatTTTAATTTggg ccatgaggaatgggatatcc						
100aF2-R2	TTG	ACTG				602	
LA1932TO774F2-R2	TTG	ACTG				596	
Purple_russianF2	TTG	ACTG				602	
Consensus	ttg	tactg					

Comments: Sequence Gc171 = Purple Russian ≠ LA1932 ≠ Gh25-6. Therefore, there is no introgression in the resistant line, Gc171 for this marker, but there is an introgression for Gh25-6.