C2_At3g10920, 13 cM, Chrososome VI

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September 30, 2006

See SGN site for primer information for these COS II primers.

Purple Russian:

>13 cM, Purple Russian, Sept. 30, 2006, 682 bp
TGGCTTGGTGTGGACAAAGAGCTTAAGCGCCTGGTGGTTGAAACCACTGCAAATCAGGTG
ATTGATGCATGTTCTGTTTATCCTAAATTAATAGATAGCTGAGCATCATCTTCAACAAGT
GAAGCTGATGCCTCCACTTTGTTGCCTTGACTTAGAGGTTAATATTACCCAAGAAAGTGT
GAAAACAAAATACATAAAACTGCTAAATTCTTGATTGCTTACAAGTCTTAGAGCTGTAGA
CTAAATAATCTGACTTCCATTTATTATTAGCTGCCATAATTGATAGATGTATTTTTTATG
TTAATTGATGCTGTCTTTGCTCGGTCTGAGACTCTGAGTTTTCCTCTTTGGTTAATGAAC
TTCTCTAACCGGTCCTTTAGGATTATTTGCATTTCCCGACCTCCTTGGTCTGTCAGTATT
CTGCAGTCTACATCATACTGTCCGGCTTTAACTGTAGATGGGTCTTATTTTTTATCTTTT
TTGACAATCCTTTTTATACAGAGGAATGTATAAGAATGTTGGCATATGCTTTCGCAATAG
TTGCTTGTCAGGTTGTCTTATGAATTATGATAGGGCTCATTTTTGGGATTATTTTGTTCT
TGCAGGACCCTTTGGTTTCTAAAGGAGCAAATTTGGTACCTCTTCTGGGTATAGACGTTT
GGGAACACGCATACTACTTGCA

LA1777, S. habrochaites

>13 cM, LA1777, S. habrochaites, Sept. 30, 2006, 685 bp
TGGCTTGGGTGTGGACAAAGAGCTTAAGCGCCTGGTGGTTGAAACCACTGCAAATCAGGT
GATTGATGACATGTTCTGTTTATCCTAAATAAATAGATAGCTGAGCATCATCTTCAACAA
GTGAAGTTGATGCCTCCACTTTGTTGCCTTGACTTAGAGGTTAATATTATCCAAGAAATC
GTGAAAACAAAATACATAAGACTGCTAAATTCTTGATTGCTTACAAGTCTTAGAGCTGTA
GACTAAATAATCTGACTTCCATTTATTATTAGCTGCCATAATTGATAGACGTATTTTTTA
TGTTAATTGGTGCTGTCTTTGCACGGTCTGAGACTCTGAGTTTTCCTCTTTGGTTAATGA
ACTTCTCTAACCTGCCCTTTAGGATTATTTGTATTTCCCCACCTCCTTGGTCTGTCAGCA
TTCTGCAGTCTACATCATACTGTCCGGGCTTTAACTGTAGATGGGTCTTACTTTTGTCTT
TTTTGACAATCCTTTTTATATAGGGGATTGCATAAGAATGTTGGTATATCCTTTTGCAAT
AGTTGCTTGTCAGGTTGTCTTATGAATTATGATAGGGCTCATTTTTGGGATTATTTTGTT
CTTGCAGGACCCTTTGGTTTCTAAAGGAGCAAATTTGGTACCTCTTCTGGGNATAGACGT
TTGGGAACACGCATACTACTTGCAA

>partial sequence, GMh8632, 499 bp
TGGCTTGGTGTGGACAAAGAGCTTAAGCGCCTGGTGGTTGAAACCACTGCAAATCAGGTG
ATTGATGCATGTTCTGTTTATCCTAAATTAATAGATAGCTGAGCATCATCTTCAACAAGT
GAAGTTGATGCCTCCACTTTGTTGCCTTGACTTAGAGGTTGATATTATCCAAGAAAGTGT
GAAAACAAAAGACATAAGACTGCTGTAGACTAAATAATCTGACTTCCATTTATTATTAGC
TGCCATAATTGATAGATGTATTTTTTATGTTAATTGATGCTGTCTTTGTACGGTCTGAGA
CTCTGAGTTTTCCTCTTTGATTAATGAACTTCTCTAACCGGTCCTTTAGGATTATTTGCA
TTTCCCACCTCCTTGGTCTGTCAGCATTCTGCAGTCTACATCATACTGTCCGGGCTTTAA
CTGTAGATGGGTCTTATTTTTGTCTTTTTTGACAATCCTTTTTATACAGGGGATTGCATA
AGAATGTTGGCATATGCTT

Introgression = Introg from begomovirus resistant breeding lines from Guatemala

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LA1777-DM6F4R4 TGGCTTGGGTGTGGACAAAGAGCTTAAGCGCCTGGTGGTTGAAACCACTGCAAATCAGGT     60
PurpRuss       TGGCTTGG.TGTGGACAAAGAGCTTAAGCGCCTGGTGGTTGAAACCACTGCAAATCAGGT     59
Introg         TGGCTTGG.TGTGGACAAAGAGCTTAAGCGCCTGGTGGTTGAAACCACTGCAAATCAGGT     59
Consensus      tggcttgg tgtggacaaagagcttaagcgcctggtggttgaaaccactgcaaatcaggt

LA1777-DM6F4R4 GATTGATGACATGTTCTGTTTATCCTAAATAAATAGATAGCTGAGCATCATCTTCAACAA    120
PurpRuss       GATTGATG.CATGTTCTGTTTATCCTAAATtAATAGATAGCTGAGCATCATCTTCAACAA    118
Introg         GATTGATG.CATGTTCTGTTTATCCTAAATtAATAGATAGCTGAGCATCATCTTCAACAA    118
Consensus      gattgatg catgttctgtttatcctaaat aatagatagctgagcatcatcttcaacaa

LA1777-DM6F4R4 GTGAAGTTGATGCCTCCACTTTGTTGCCTTGACTTAGAGGTTAATATTATCCAAGAAATC    180
PurpRuss       GTGAAGcTGATGCCTCCACTTTGTTGCCTTGACTTAGAGGTTAATATTAcCCAAGAAAgt    178
Introg         GTGAAGTTGATGCCTCCACTTTGTTGCCTTGACTTAGAGGTTgATATTATCCAAGAAAgt    178
Consensus      gtgaag tgatgcctccactttgttgccttgacttagaggtt atatta ccaagaaa

LA1777-DM6F4R4 GTGAAAACAAAATACATAAGACTGCTAAATTCTTGATTGCTTACAAGTCTTAGAGCTGTA    240
PurpRuss       GTGAAAACAAAATACATAAaACTGCTAAATTCTTGATTGCTTACAAGTCTTAGAGCTGTA    238
Introg         GTGAAAACAAAATACATAAGACTGCT.............................GTA    207
Consensus      gtgaaaacaaaatacataa actgct                              gta

LA1777-DM6F4R4 GACTAAATAATCTGACTTCCATTTATTATTAGCTGCCATAATTGATAGACGTATTTTTTA    300
PurpRuss       GACTAAATAATCTGACTTCCATTTATTATTAGCTGCCATAATTGATAGAtGTATTTTTTA    298
Introg         GACTAAATAATCTGACTTCCATTTATTATTAGCTGCCATAATTGATAGAtGTATTTTTTA    267
Consensus      gactaaataatctgacttccatttattattagctgccataattgataga gtatttttta

LA1777-DM6F4R4 TGTTAATTGGTGCTGTCTTTGCACGGTCTGAGACTCTGAGTTTTCCTCTTTGGTTAATGA    360
PurpRuss       TGTTAATTGaTGCTGTCTTTGCtCGGTCTGAGACTCTGAGTTTTCCTCTTTGGTTAATGA    358
Introg         TGTTAATTGaTGCTGTCTTTGtACGGTCTGAGACTCTGAGTTTTCCTCTTTGaTTAATGA    327
Consensus      tgttaattg tgctgtctttg  cggtctgagactctgagttttcctctttg ttaatga

LA1777-DM6F4R4 ACTTCTCTAACCTGCCCTTTAGGATTATTTGTATTTCCCCACCTCCTTGGTCTGTCAGCA    420
PurpRuss       ACTTCTCTAACCgGtCCTTTAGGATTATTTGcATTTCCCgACCTCCTTGGTCTGTCAGtA    418
Introg         ACTTCTCTAACCgGtCCTTTAGGATTATTTGcATTTCCC.ACCTCCTTGGTCTGTCAGCA    386
Consensus      acttctctaacc g cctttaggattatttg atttccc acctccttggtctgtcag a

LA1777-DM6F4R4 TTCTGCAGTCTACATCATACTGTCCGGGCTTTAACTGTAGATGGGTCTTACTTTT.GTCT    479
PurpRuss       TTCTGCAGTCTACATCATACTGTCCGG.CTTTAACTGTAGATGGGTCTTAtTTTTtaTCT    477
Introg         TTCTGCAGTCTACATCATACTGTCCGGGCTTTAACTGTAGATGGGTCTTAtTTTT.GTCT    445
Consensus      ttctgcagtctacatcatactgtccgg ctttaactgtagatgggtctta tttt  tct

LA1777-DM6F4R4 TTTTTGACAATCCTTTTTATATAGGGGATTGCATAAGAATGTTGGTATATCCTTTTGCAA    539
PurpRuss       TTTTTGACAATCCTTTTTATAcAGaGGAaTGtATAAGAATGTTGGcATATgCTTTcGCAA    537
Introg         TTTTTGACAATCCTTTTTATAcAGGGGATTGCATAAGAATGTTGGcATATgCTTTcGCAA    505
Consensus      tttttgacaatccttttttata ag gga tg ataagaatgttgg atat cttt gcaa

LA1777-DM6F4R4 TAGTTGCTTGTCAGGTTGTCTTATGAATTATGATAGGGCTCATTTTTGGGATTATTTTGT    599
PurpRuss       TAGTTGCTTGTCAGGTTGTCTTATGAATTATGATAGGGCTCATTTTTGGGATTATTTTGT    597
Introg         TAGTTGCTTGTCAGGTTaTCTTATGAATTATGATAGGGCTCATTTTTGGGATTATTTTGT    565
Consensus      tagttgcttgtcaggtt tcttatgaattatgatagggctcatttttgggattattttgt

LA1777-DM6F4R4 TCTTGCAGGACCCTTTGGTTTCTAAAGGAGCAAATTTGGTACCTCTTCTGGGNATAGACG    659
PurpRuss       TCTTGCAGGACCCTTTGGTTTCTAAAGGAGCAAATTTGGTACCTCTTCTGGGtATAGACG    657
Introg         TCTTGCAGGACCCTTTGGTTTCTAAAGGAGCAAATTTGGTACCTCTTCTGGGtATAGACG    625
Consensus      tcttgcaggacccttggtttctaaaggagcaaatttggtacctcttctggg atagacg

LA1777-DM6F4R4 TTTGGGAACACGCATACTACTTGCAA                                     685
PurpRuss       TTTGGGAACACGCATACTACTTGCA                                      682
Introg         TTTGGGAACACGCATACTACTTGCA                                      650
Consensus      tttgggaacacgcatactacttgca
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Introgression was associated with the Ghxxx and Gcxxx lines from the Guatemala breeding program.

Purple Russian Sequence used to search for matches.

SGN site: no matches with BLAST search of full sequence for BAC clones.

GenBank: 100% identity for part of sequence with *S. lycopersicum* mRNA (BT013288), and high identity with manganese superoxide dismutase from *Nicotiana plumbaginifolia* (X11482), *Arabidopsis*, and *Capsicum annuum*.