Title: Sorghum *Dw1*, an agronomically important gene for lodging resistance, encodes a novel protein involved in cell proliferation

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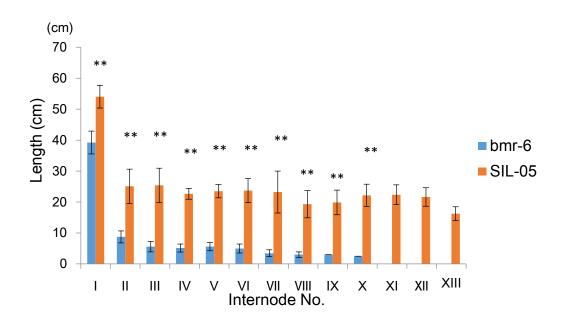
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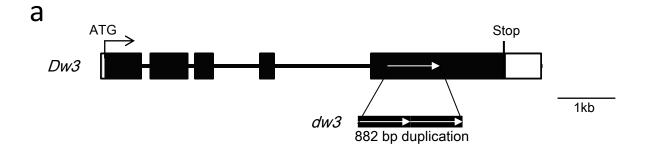
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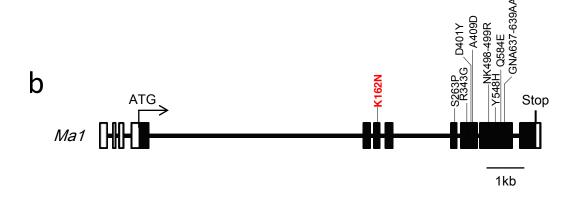
Supplementary figures: S1 to S7

Supplementary tables: S1

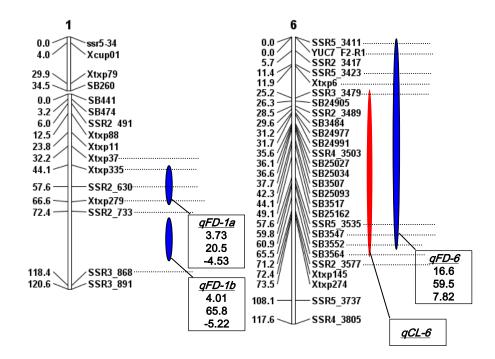


Supplementary Figure S1 \mid Length of each internode of bmr-6 (blue) and SIL-05 (orange). Two asterisks indicates P < 0.01.





Supplementary Figure S2 | **bmr-6 contains the loss-of-function alleles of** *Dw3* and *Ma1*. The gene structures of *Dw3* (a) and *Ma1* (b), and their mutations are shown. Protein coding regions and UTRs are represented by black and white boxes, respectively. Introns are indicated by black bars. 'ATG' and 'Stop' indicate the translation initiation and stop codons, respectively. (a) bmr-6 contains a duplication of 882 bp in *Dw3*. (b) Positions of nine amino acid exchanges are shown, and the mutation K162N, which was reported (see text) is indicated in bold red.



Supplementary Figure S3 | QTL analysis for FD and a comparison of QTL map positions for FD and CL. Blue and red ellipses indicate the positions of QTLs for FD and CL, respectively. Only chromosomes with LOD scores > 3.0 are shown. Information in the box is same as in Fig. 1e. The SIL-05 allele delayed the FD in qFD-6, and the bmr-6 allele accelerated the FD in qFD-1a and qFD-1b.

BTx623 Dwarf white milo Tall white sooner milo bmr-6	1:CATACGTGTTTTACTTTTACACTATTGGTGGTGGCTTGACTCAACTGCTCAGTGCTCAGG 60 1:CATACGTGTTTTACTTTTACACTATTGGTGGTGGCTTGACTCAACTGCTCAGTGCTCAGG 60 1:CATACGTGTTTTACTTTTACACTATTGGTGGTGGCTTGACTCAACTGCTCAGTGCTCAGG 60 1:CATACGTGTTTTACTTTTACACTATTGGTGGTGGCTTGACTCAACTGCTCAGTGCTCAGG 60 ************************************
BTx623 Dwarf white milo Tall white sooner milo bmr-6	61:CACCTTGCTCGCCCGCGCGCAGCACGGCAGCACGCAAGCGACGGCGCGACGCTCCACCGC 120 61:CACCTTGCTCGCCCGCGCGCAGCACGGCAGCACGCCAAGCGAAGCGACGCGCACGCTCCACCGC 120 61:CACCTTGCTCGCCCGCGCGCAGCACGGCAGCACGCAAGCGAAGCGACGCGCGACGCTCCACCGC 120 61:CACCTTGCTCGCCCGCGCGCAGCACGGCAGCACGCAAGCGAAGCGACGCCGC
BTx623 Dwarf white milo Tall white sooner milo bmr-6	121:TCTCCGCTCGATCCCTCTCTTCTCCCATTTCGCAGGCGACGGCGACGCTCCACCGCAC 180 121:TCTCCGCTCGATCCCTCTCTTCTCCCATTTCGCAGGCGACGGCGACGCTCCACCGCAC 180 121:TCTCCGCTCGATCCCTCTTCTCCCCATTTCGCAGGCGACGGCGCGACGCTCCACCGCAC 180 121:TCTCCGCTCGATCCCTCTTCTCCCCATTTCGCAGGCGACGGCGCGACGCTCCACCGCAC 180 ************************************
BTx623 Dwarf white milo Tall white sooner milo bmr-6	181:CGCGAGGCAAGGTCCCTCTTCGTTGAGCTCGCTGCTCGGGGTTCGGGGCGGGTTTGAGTA 240 181:CGCGAGGCAAGGTCCCTCTTCGTTGAGCTCGCTGCTCGGGGTTCGGGGCGGGTTTGAGTA 240 181:CGCGAGGCAAGGTCCCTCTTCGTTGAGCTCGCTGCTCGGGGTTCGGGGCGGGTTTGAGTA 240 181:CGCGAGGCAAGGTCCCTCTTCGTTGAGCTCGCTGCTCGGGGTTCGGGGCGGGTTTGAGTA 240 ************************************
BTx623 Dwarf white milo Tall white sooner milo bmr-6	241:TCTGATTTCGGGTGCGGGTACGCGGATGCTCCACCCGCCCCCGACCCGCTCCGTTGCCAT 300 241:TCTGATTTCGGGTGCGGGTACGCGGATGCTCCACCCGCCCCCGACCCGCTCCGTTGCCAT 300 241:TCTGATTTCGGGTGCGGGTACGCGGATGCTCCACCCGCCCCCGACCCGTCCCGTTGCCAT 300 241:TCTGATTTCGGGTGCGGGTACGCGGATGCTCCACCCGCCCCCGACCCGCTCCGTTGCCAT 300 ***********************************
BTx623 Dwarf white milo Tall white sooner milo bmr-6	301:CCCGTGCCGTGCTCACCCCCCTACCTTTTCTTCTCCGGTTCACCACCCCCTCGTGCGCTC 360 301:CCCGTGCCGTGCTCACCCCCCTACCTTTTCTTCTCCGGTTCACCACCCCCTCGTGCGCTC 360 301:CCCGTGCCGTGCTCACCCCCCTACCTTTTCTTCTCCGGTTCACCACCCCCTCGTGCGCTC 360 301:CCCGTGCCGTGCTCACCCCCCTACCTTTTCTTCTCCGGTTCACCACCCCCTCGTGCGCTC 360 ************************************
BTx623 Dwarf white milo Tall white sooner milo bmr-6	361:TCCTCACTCTCACTCAGCTCTCTTTTCTCTCTGTGGGAGACGACTGGGCGACCGCCGG 420 361:TCCTCACTCTCACTCAGCTCTCTTTTCTCTCTGTGGGAGACGACTGGGCGACCGCCGG 420 361:TCCTCACTCTCACTCAGCTCTCTCTTTCTCTCTGTGGAGACGACTGGGCGACCGCCGG 420 361:TCCTCACTCTCACTCAGCTCTCTTTCTCTCTCTGTGGAGACGACTGGGCGACCGCCGG 420 ************************************
BTx623 Dwarf white milo Tall white sooner milo bmr-6	421:CGCCGACCGTGCTCAGGCCTTCGTCGAGACCATCGCCGGCGAAGAGCACCCACC
BTx623 Dwarf white milo Tall white sooner milo bmr-6	481:GCGCACTTCTTGTCTTCCCTTCCAGATGCGCGAAACCGAGCACGCAAACCCTAACTTAAG 540 481:GCGCACTTCTTGTCTTCCCTTCCAGATGCGCGAAACCGAGCACGCAAACCCTAACTTAAG 540 481:GCGCACTTCTTGTCTTCCCTTCCAGATGCGCGAAACCGAGCACGCAAACCCTAACTTAAG 540 481:GCGCACTTCTTGTCTTCCCTTCCAGATGCGCGAAACCGAGCACGCAAACCCTAACTTAAG 540 ************************************
BTx623 Dwarf white milo Tall white sooner milo bmr-6	541:CTATTTGGCTATTTGCAGCTGGATCTGATCTAATTACAGGTGCATACGCGCATTATGCCT 600 541:CTATTTGGCTATTTGCAGCTGGATCTGATCTAATTACAGGTGCATACGCGCATTATGCCT 600 541:CTATTTGGCTATTTGCAGCTGGATCTGATCTAATTACAGGTGCATACGCGCATTATGCCT 600 541:CTATTTGGCTATTTGCAGCTGGATCTGATCTAATTACAGGTGCATACGCGCATTATGCCT 600 ***********************************
BTx623 Dwarf white milo Tall white sooner milo bmr-6	601:ACTAATTTCGATTCCTTGCAAAAATTGTCGGCTGTATTTGTGTACACCCATGCCATTTAC 660 601:ACTAATTTCGATTCCTTGCAAAAATTGTCGGCTGTATTTGTGTACACCCATGCCATTTAC 660 601:ACTAATTTCGATTCCTTGCAAAAATTGTCGGCTGTATTTGTGTACACCCATGCCATTTAC 660 601:ACTAATTTCGATTCCTTGCAAAAATTGTCGGCTGTATTTGTGTACACCCATGCCATTTAC 660 **********************************
BTx623 Dwarf white milo Tall white sooner milo bmr-6	661:TGGGTCCGCCTCTGATCCCGAGCAACCGTGTGTTTTACAGTCAGAGATGTCTTCAGTTG 720 661:TGGGTCCGCCTCTGATCCCGAGCAACCGTGTGTTTTACAGTCAGAGATGTCTTCAGTTG 720 661:TGGGTCCGCCTCTGATCCCGAGCAACCGTGTGTTTTACAGTCAGAGATGTCTTCAGTTG 720 661:TGGGTCCGCCTCTGATCCCGAGCAACCGTGTGTTTTACAGTCAGAGATGTCTTCAGTTG 720 ************************************

BTx623 Dwarf white milo Tall white sooner milo bmr-6	721:GGAGCAGCCCTGGCACCAGGGCGGCGAATGGTGCCGCTGCCATCAGTGCTGCCGCGACGG 7 721:GGAGCAGCCCTGGCACCAGGGCGGCGAATGGTGCCGCTGCCATCAGTGCTGCCGCGACGG 7 721:GGAGCAGCCCTGGCACCAGGGCGGCGAATGGTGCCGCTGCCATCAGTGCTGCCGCACGG 7 721:GGAGCAGCCCTGGCACCAGGGCGGCGAATGGTGCCGCTGCCATCAGTGCTGCCGCACGG 7 ***********************************	'80 '80
BTx623 Dwarf white milo Tall white sooner milo bmr-6	781:CAGCAGGCTCAGCCGACGCCAGATTCCACTCCCAACTACTACAGCAGGACAGGGTACATA 8 781:CAGCAGGCTCAGCCGACGCCAGATTCCACTCCCAACTACTACAGCAGGACAGGGTACATA 8 781:CAGCAGGCTCAGCCGACGCCAGATTCCACTCCCAACTACTACAGCAGGACAGGGTACATA 8 781:CAGCAGGCTCAGCCGACGCCAGATTCCACTCCCAACTACTACAGCAGGACAGGGTACATA 8 ************************************	340 340
BTx623 Dwarf white milo Tall white sooner milo bmr-6	841:CACTATATACCACTTGTTGTTCCATGGGCGGATGCAATCGGGCTTGGGCTTTAGCTGCAG 9 841:CACTATATACCACTTGTTGTTCCATGGGCGGATGCAATCGGGCTTGGGCTTTAGCTGCAG 9 841:CACTATATACCACTTGTTGTTCCATGGGCGGATGCAATCGGGCTTGGGCTTTAGCTGCAG 9 841:CACTATATACCACTTGTTGTTCCATGGGCGGATGCAATCGGGCTTGGGCTTTAGCTGCAG 9 ************************************	000
BTx623 Dwarf white milo Tall white sooner milo bmr-6	901:CTTTTGCCTTGCATGCTTTAGATATGTGGACGACAGGATCAGTACCGGAATTTTTAGTCG 9 901:CTTTTGCCTTGCATGCTTTAGATATGTGGACGACAGGATCAGTACCGGAATTTTTAGTCG 9 901:CTTTTGCCTTGCATGCTTTAGATATGTGGACGACAGGATCAGTACCGGAATTTTTAGTCG 9 901:CTTTTGCCTTGCATGCTTTAGATATGTGGACGACAGGATCAGTACCGGAATTTTTAGTCG 9 ************************************)60)60
BTx623 Dwarf white milo Tall white sooner milo bmr-6	961:GCCTTGACGACCTAGATTGGCAATTTGGGCCAGCCTTTGCTTACTCAGTACGAATTGTAC 1961:GCCTTGACGACCTAGATTGGCAATTTGGGCCAGCCTTTGCTTACTCAGTACGAATTGTAC 1961:GCCTTGACGACCTAGATTGGCAATTTGGGCAACCTTTGCTTACTCAGTACGAATTGTAC 1961:GCCTTGACGACCTAGATTGGCAATTTGGGCCAGCCTTTGCTTACTCAGTACGAATTGTAC 1961:GCCTTGACGAATTGGCAATTGGCCAGCCTTTGCTTACTCAGTACGAATTGTAC 1961:GCCTTGACGAATTGAATTGAATTAGAATTAATTA	.020 .020
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1021:TGCCCTGCAGTGGTTATGACTTGAAACTGGGCATCTTTACCAGCAATAATTTGGCTTCAG 1 1021:TGCCCTGCAGTGGTTATGACTTGAAACTGGGCATCTTTACCAGCAATAATTTGGCTTCAG 1 1021:TGCCCTGCAGTGGTTATGACTTGAAACTGGGCATCTTTACCAGCAATAATTTGGCTTCAG 1 1021:TGCCCTGCAGTGGTTATGACTTGAAACTGGGCATCTTTACCAGCAATAATTTGGCTTCAG 1	.080 .080
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1081:TACTATATATATGCTTGGTTGCTTCTGTCAGATAATTTATTT	.140 .140
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1141:CTATGTTGTAATGCACACGTTTTGCACTCCTTATTTTGTTTTCAGTTCCAGAGGCTTTTG 1 1141:CTATGTTGTAATGCACACGTTTTGCACTCCTTATTTTGTTTTCAGTTCCAGAGGCTTTTG 1 1141:CTATGTTGTAATGCACACGTTTTGCACTCCTTATTTTGTTTTCAGTTCCAGAGGCTTTTG 1 1141:CTATGTTGTAATGCACACGTTTTGCACTCCTTATTTTGTTTTCAGTTCCAGAGGCTTTTG 1 ************************************	.200 .200
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1201:TGATATCATTCCTCCAGAGAATGTATATACTAATAAGTTCTTGATTTTACCCCTCGATAC 1 1201:TGATATCATTCCTCCAGAGAATGTATATACTAATAAGTTCTTGATTTTACCCCTCGATAC 1 1201:TGATATCATTCCTCCAGAGAATGTATATACTAATAAGTTCTTGATTTTACCCCTCGATAC 1 1201:TGATATCATTCCTCCAGAGAATGTATATACTAATAAGTTCTTGATTTTACCCCTCGATAC 1 ************************************	.260 .260
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1261:ACTCCCACCCATTTGATGTTGAAGTAGGGGCAAAAAGCTTTTACACCTGGGATAATCCTT 1 1261:ACTCCCACCCATTTGATGTTGAAGTAGGGGCAAAAAGCTTTTACACCTGGGATAATCCTT 1 1261:ACTCCCACCCATTTGATGTTGAAGTAGGGGCAAAAAGCTTTTACACCTGGGATAATCCTT 1 1261:ACTCCCACCCATTTGATGTTGAAGTAGGGGCAAAAAGCTTTTACACCTGGGATAATCCTT 1 ***********************************	.320 .320
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1321:GCTTTATGATAAAAATCTTTTTCCATGTGAATACTTTTGGATTTTTGTGAAACACTAACA 1 1321:GCTTTATGATAAAAAATCTTTTTCCATGTGAATACTTTTTGGATTTTTTTT	.380 .380
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1381:TTTCGTATGTTCTATTGTATGATTCCTTTGATGCTTATTCTTATGCATTTTTTCTTCCCA 1. 1381:TTTCGTATGTTCTATTGTATGATTCCTTTGATGCTTATTCTTATGCATTTTTTTCTTCCCA 1. 1381:TTTCGTATGTTCTATTGTATGATTCCTTTGATGCTTATTCTTATGCATTTTTTCTTCCCA 1. 1381:TTTCGTATGTTCTATTGTATGATTCCTTTGATGCTTATTCTTATGCATTTTTTCTTCCCA 1. ************************************	.440 .440

BTx623 Dwarf white milo Tall white sooner milo bmr-6	1441:CAACACAATGATAATAAAAATGTTTTTTTGTATACAAAGTATAGATTACTGCTCCTTTGA 1441:CAACACAATGATAATAAAAAATGTTTTTTTGTATACAAAGTATAGATTACTGCTCCTTTGA 1441:CAACACAATGATAATAAAAAATGTTTTTTTGTATACAAAGTATAGATTACTGCTCCTTTGA 1441:CAACACAATGATAATAAAAAATGTTTTTTTGTATACAAAGTATAGATTACTGCTCCTTTGA	1500 1500 1500

BTx623 Dwarf white milo Tall white sooner milo bmr-6	1501:AATTTCGTTGTCATGTGTTTTCTTTTATTTCTGTGGTGACAGCTAAGTTATTTGCTTGGA 1501:AATTTCGTTGTCATGTGTTTTCTTTTATTTCTGTGGTGACAGCTAAGTTATTTGCTTGGA 1501:AATTTCGTTGTCATGTGTTTTCTTTTATTTCTGTGGTGACAGCTAAGTTATTTGCTTGGA 1501:AATTTCGTTGTCATGTGTTTTCTTTTATTTCTGTGGTGACAGCTAAGTTATTTGCTTGGA **********************************	1560 1560 1560
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1561:CTAACACACGCTTCTCTACTCTAAACAGCAAAGTAGATGGGCTGGCT	1620 1620 1620
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1621:ATCATGTTTCGGATCGCAGAAGGGCGGGAAAAGAATTGTTCCTGCAGCACGTACTTCTGA 1621:ATCATGTTTCGGATCGCAGAAGGGCGGGAAAAGAATTGTTCCTGCAGCACGTACTTCTGA 1621:ATCATGTTTCGGATCGCAGAAGGGCGGGAAAAGAATTGTTCCTGCAGCACGTACTTCTGA 1621:ATCATGTTTCGGATCGCAGAAGGGCGGGAAAAGAATTGTTCCTGCAGCACGTACTTCTGA ************************************	1680 1680 1680
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1681:TGGGAATGGATCAAATGCTCGTGGAAATGGTCAATCTGGTGCCAATTCAAACCAAAATAT 1681:TGGGAATGGATCAAATGCTCGTGGAAATGGTCAATCTGGTGCCAATTCAAACCAAAATAT 1681:TGGGAATGGATCAAATGCTCGTGGAAATGGTCAATCTGGTGCCAATTCAAACCAAAATAT 1681:TGGGAATGGATCAAATGCTCGTGGAAATGGTCAATCTGGTGCCAATTCAAACCAAAATAT	1740 1740 1740
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1741:GCCTATGAATTTATCTCTTCTGGCTCCACCATCATCACCAGCATCCTTCTCAAACTCTGC 1741:GCCTATGAATTTATCTCTTCTGGCTCCACCATCATCACCAGCATCCTTCTCAAACTCTGC 1741:GCCTATGAATTTATCTCTTCTGGCTCCACCATCATCACCAGCATCCTTCTCAAACTCTGC 1741:GCCTATGAATTTATCTCTTCTGGCTCCACCATCATCACCAGCATCCTTCTCAAACTCTGC *********************************	1800 1800 1800
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1801:CCTTCCTTCGACTGCTCAATCACCGAATTGCTTTCTGTCTG	1860 1860 1860
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1861:CGGTCCAACGTCTAATATGTTCGCTGTTGGGCCATATGCTAATGAACCTCAACTTGTCTC 1861:CGGTCCAACGTCTAATATGTTCGCTGTTGGGCCATATGCTAATGAACCTCAACTTGTCTC 1861:CGGTCCAACGTCTAATATGTTCGCTGTTGGGCCATATGCTAATGAACCTCAACTTGTCTC 1861:CGGTCCAACGTCTAATATGTTCGCTGTTGGGCCATATGCTAATGAACCTCAACTTGTCTC *******************************	1920 1920 1920
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1921: GCCACCTGTCTTCTCAACTTACACAACTGAGCCATCCACAGCACCATTGACCCCACCACCACCACCACCACCACCACCACCACCACCA	1980 1980 1980
BTx623 Dwarf white milo Tall white sooner milo bmr-6	1981:TGAACTAGCTCATGCAACAACGCCTTCTTCTCCAGATGTTCCATATGCTCGATTTCTTTC	2040 2040 2040
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2041:TTCTTCTATGGATATCTAAACTGCCAGCAAGGAGCATAACATGCCTTTCTTATCAACAGC 2041:TTCTTCTATGGATATCTAAACTGCCAGCAAGGAGCATAACATGCCTTTCTTATCAACAGC 2041:TTCTTCTATGGATATCAAAACTGCCAGCAAGGAGCATAACATGCCTTTCTTATCAACAGC 2041:TTCTTCTATGGATATCTAAACTGCCAGCAAGGAGCATAACATGCCTTTCTTATCAACAGC ********************************	2100 2100 2100
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2101:CTATTCTGGTGGTTCAGGACTCCAGGCATCCTACCCACTTTACCCTGAAAGCCCTTGTAG 2101:CTATTCTGGTGGTTCAGGACTCCAGGCATCCTACCCACTTTACCCTGAAAGCCCTTGTAG 2101:CTATTCTGGTGGTTCAGGACTCCAGGCATCCTACCCACTTTACCCTGAAAGCCCTTGTAG 2101:CTATTCTGGTGGTTCAGGACTCCAGGCATCCTACCCACTTTACCCTGAAAGCCCTTGTAG *********************************	2160 2160 2160

BTx623 Dwarf white milo Tall white sooner milo bmr-6	2161:CAGCCTCATCTCACCAGCTTCAGTAACTCCGAGGACTGGTCTATCCTCACCTATACCTGA 2161:CAGCCTCATCTCACCAGCTTCAGTAACTCCGAGGACTGGTCTATCCTCACCTATACCTGA 2161:CAGCCTCATCTCACCAGCTTCAGTAACTCCGAGGACTGGTCTATCCTCACCTATACCTGA 2161:CAGCCTCATCTCACCAGCTTCAGTAACTCCGAGGACTGGTCTATCCTCACCTATACCTGA ************************************	2220 2220
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2221:GCAAGAGGTTCCTCCTGCCCATTGGAAGACCTCTAGGTCCGCCTGCGACACGCCATACTT 2221:GCAAGAGGTTCCTCCTGCCCATTGGAAGACCTCTAGGTCCGCCTGCGACACGCCATACTT 2221:GCAAGAGGTTCCTCCTGCCCATTGGAAGACCTCTAGGTCCGCCTGCGACACGCCATACTT 2221:GCAAGAGGTTCCTCCTGCCCATTGGAAGACCTCTAGGTCCGCCTGCGACACGCCATACTT *******************************	2280 2280
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2281:CAGGGCTTCACCAATTCCTGAGCAAGAGACCACTGCACAATGGAAGACCTCTAGATCTGC 2281:CAGGGCTTCACCAATTCCTGAGCAAGAGACCACTGCACAATGGAAGACCTCTAGATCTGC 2281:CAGGGCTTCACCAATTCCTGAGCAAGAGACCACTGCACAATGGAAGACCTCTAGATCTGC 2281:CAGGGCTTCACCAATTCCTGAGCAAGAGACCACTGCACAATGGAAGACCTCTAGATCTGC **********************************	2340 2340
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2341:TTGTGACACACCGTATGCCAGGAACTCACCAACCAATATTTTTGGTCTGGATTCATCTAC 2341:TTGTGACACACCGTATGCCAGGAACTCACCAACCAATATTTTTGGTCTGGATTCATCTAC 2341:TTGTGACACACCGTATGCCAGGAACTCACCAACCAATATTTTTGGTCTGGATTCATCTAC 2341:TTGTGACACACCCGTATGCCAGGAACTCACCAACCAATATTTTTGGTCTGGATTCATCTAC *****************************	2400 2400
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2401:CCCGAGAAACTATATGCTAGATAGCAATTTCTTTCGGCCAGCGGCATCTGCTCAATTCTA 2401:CCCGAGAAACTATATGCTAGATAGCAATTTCTTTCGGCCAGCGGCATCTGCTCAATTCTA 2401:CCCGAGAAACTATATGCTAGATAGCAATTTCTTTCGGCCAGCGGCATCTGCTCAATTCTA 2401:CCCGAGAAACTATATGCTAGATAGCAATTTCTTTCGGCCAGCGGCATCTGCTCAATTCTA *****************************	2460 2460
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2461:CCTGGACCAGGCTCAGCAGACGTTTCCACATAATGGCGGAGGGTTAGTGTATCCAGGGA 2461:CCTGGACCAGGCTCAGCAGACGTTTCCACATAATGGCGGAGGGTTAGTGTATCCAGGGA 2461:CCTGGACCAGGCTCAGCAGACGTTTCCACATAATGGCGGGAGGGTTAGTGTATCCACGGA 2461:CCTGGACCAGGCTCAGCAGACGTTTCCACATAATGGCGGGAGGGTTAGTGTATCCAGGGA ********************************	2520 2520
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2521:GAAGCAAGATGCCGATGAAATCGAAGCTTACAGAGCTTCATTTGGGTTTAGTGCTGATGA 2521:GAAGCAAGATGCCGATGAAATCGAAGCTTACAGAGCTTCATTTGGGTTTAGTGCTGATGA 2521:GAAGCAAGATGCCGATGAAATCGAAGCTTACAGAGCTTCATTTGGGTTTAGTGCTGATGA 2521:GAAGCAAGATGCCGATGAAATCGAAGCTTACAGAGCTTCATTTGGGTTTAGTGCTGATGA *********************************	2580 2580
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2581:AATTGTCCAATCTCAATCTTATGTGGGGATACCAGATGCGGTTGATGAGTCATTCAGTAT 2581:AATTGTCCAATCTCAATCTTATGTGGGGATACCAGATGCGGTTGATGAGTCATTCAGTAT 2581:AATTGTCCAATCTCAATCTTATGTGGGGATACCAGATGCGGTTGATGAGTCATTCAGTAT 2581:AATTGTCCAATCTCAATCTTATGTGGGGATACCAGATGCGGTTGATGAGTCATTCAGTAT **********************************	2640 2640
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2641:ATCACCATTTGGAAACAATGCTCCTGCTACTGAGATATGCCCATTTAGTGATCTGCCTAA 2641:ATCACCATTTGGAAACAATGCTCCTGCTACTGAGATATGCCCCATTTAGTGATCTGCCTAA 2641:ATCACCATTTGGAAACAATGCTCCTGCTACTGAGATATGCCCCATTTAGTGATCTGCCTAA 2641:ATCACCATTTGGAAACAATGCTCCTGCTACTGAGATATGCCCCATTTAGTGATCTGCCTAA **********************************	2700 2700
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2701:TGAGGTTCAGAAGGTGGATAAATCATGTGCCTACGCTAAAGATGGCACAAGTCCAAAGAA 2701:TGAGGTTCAGAAGGTGGATAAATCATGTGCCTACGCTAAAGATGGCACAAGTCCAAAGAA 2701:TGAGGTTCAGAAGGTGGATAAATCATGTGCCTACGCTAAAGATGGCACAAGTCCAAAGAA 2701:TGAGGTTCAGAAGGTGGATAAATCATGTGCCTACGCTAAAGATGGCACAAGTCCAAAGAA *******************************	2760 2760
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2761:ATCAGCAAACCAACTCTCCATTGATTCTCCAAATAAAGTTCTGCGCTTGGACGTGTTCAA 2761:ATCAGCAAACCAACTCTCCATTGATTCTCCAAATAAAGTTCTGCGCTTGGACGTGTTCAA 2761:ATCAGCAAACCAACTCTCCATTGATTCTCCAAATAAAGTTCTGCGCTTGGACGTGTTCAA 2761:ATCAGCAAACCAACTCTCCATTGATTCTCCAAATAAAGTTCTGCGCTTGGACGTGTTCAA **********************************	2820 2820
BTx623 Dwarf white milo Tall white sooner milo bmr-6	2821:AGGTAACATTGGATTTTCTTGGTACTGTGTGAAATAATAATCTGCTGAATTGAAATACA 2821:AGGTAACATTGGATTTTTCTTGGTACTGTGTGAAATAATAATCTGCTGAATTGAAATACA 2821:AGGTAACATTGGATTTTTCTTGGTACTGTGGAAATAATAATCTGCTGAATTGAAATACA 2821:AGGTAACATTGGATTTTTCTTGGTACTGTGGAAATAATAATCTGCTGAATTGAAATACA ********************************	2880 2880

BTx623 Dwarf white milo	2881:TATTGTAGGCTGATTTGTACACCCAGATTTTAATAGTAACAAATTTGTTATGGCCCTACT 2881:TATTGTAGGCTGATTTGTACACCCAGATTTTAATAGTAACAAATTTGTTATGGCCCTACT	
Tall white sooner milo bmr-6	2881:TATTGTAGGCTGATTTGTACACCCAGATTTTAATAGTAACAAATTTGTTATGGCCCTACT 2881:TATTGTAGGCTGATTTGTACACCCAGATTTTAATAGTAACAAATTTGTTATGGCCCTACT ********************************	2940 2940
BTx623 Dwarf white milo	2941:ATTGTTGTGTTTCTGTTTCCACATGCTTATTGTGTTTCTGTTCTCAAATGGCAGGAACAA 2941:ATTGTTGTGTTTCTGTTTCCACATGCTTATTGTGTTTCTGTTCTCAAATGGCAGGAACAA	3000
Tall white sooner milo bmr-6	2941:ATTGTTGTGTTTCCGCTTTCCACATGCTTATTGTGTTTCTGTTCTCAAATGGCAGGAACAA 2941:ATTGTTGTGTTTCCGCACATGCTTATTGTGTTTCTGTTCTCAAATGGCAGGAACAA ****************************	
BTx623 Dwarf white milo	3001:AAGGAGGTCATCAGTCTGAGGACGAGGGTATTGTGAAAGATGGTCATCCTTTCAGAAGGA 3001:AAGGAGGTCATCAGTCTGAGGACGAGGGTATTGTGAAAGATGGTCATCCTTTCAGAAGGA	3060
Tall white sooner milo bmr-6	3001:AAGGAGGTCATCAGTCTGAGGACGAGGGTATTGTGAAAGATGGTCATCCTTTCAGAAGGA 3001:AAGGAGGTCATCAGTCTGAGGACGAGGGTATTGTGAAAGATGGTCATCCTTTCAGAAGGA *******************************	3060
BTx623 Dwarf white milo	3061:CAACAGATGAAATATCTCTAAAACCCATAGAAGTAAGGAAGAAATCTCTTCCTGGCCATT 3061:CAACAGATGAAATATCTCTAAAACCCATAGAAGTAAGGAAGAAATCTCTTCCTGGCCATT	
Tall white sooner milo bmr-6	3061:CAACAGATGAAATATCTCTAAAACCCATAGAAGTAAGGAAGAAATCTCTTCCTGGCCATT 3061:CAACAGATGAAATATCTCTAAAACCCATAGAAGTAAGGAAGAAATCTCTTCCTGGCCATT **********************************	
BTx623 Dwarf white milo	3121:CTTGCTCAGATGCAGAAATCGAGTACAGAAGGACAAGGAGTTTGAGGGATGCCAATGGTG 3121:CTTGCTCAGATGCAGAAATCGAGTACAGAAGGACAAGGAGTTTGAGGGATGCCAATGGTG	
Tall white sooner milo bmr-6	3121:CTTGCTCAGATGCAGAAATCGAGTACAGAAGGACAAGGAGTTTGAGGGATGCCAATGGTG 3121:CTTGCTCAGATGCAGAAATCGAGTACAGAAGGACAAGGAGTTTGAGGGATGCCAATGGTG ********************************	
BTx623 Dwarf white milo	3181:TTTTATCGCGGCGGAGTGCATTGGCAAGACAATTGCATTAATAAGTCACTAGTATGCAGG 3181:TTTTATCGCGGCGGAGTGCATTGGCAAGACAATTGCATTAATAAGTCACTAGTATGCAGG	
Tall white sooner milo bmr-6	3181:TTTTATCGCGGCGGAGTGCATTGGCAAGACAATTGCATTAATAAGTCACTAGTATGCAGG 3181:TTTTATCGCGGCGGAGTGCATTGGCAAGACAATTGCATTAATAAGTCACTAGTATGCAGG **********************************	3240
BTx623 Dwarf white milo	3241:GTAATTTCATAGTTCATGTAGCCTAATGTGCATTGAATTCGAGCTGTCATTAGAGTGATC 3241:GTAATTTCATAGTTCATGTAGCCTAATGTGCATTGAATTCGAGCTGTCATTAGAGTGATC	
Tall white sooner milo bmr-6	3241:GTAATTTCATAGTTCATGTAGCCTAATGTGCATTGAATTCGAGCTGTCATTAGAGTGATC 3241:GTAATTTCATAGTTCATGTAGCCTAATGTGCATTGAATTCGAGCTGTCATTAGAGTGATC ************************************	
BTx623 Dwarf white milo	3301:TGTAGCCGAAGAGTAGCCTTTATCGTATATGAGGATTATATTACCAGTTTGTGTTCTAGA 3301:TGTAGCCGAAGAGTAGCCTTTATCGTATATGAGGATTATATTACCAGTTTGTGTTCTAGA	
Tall white sooner milo bmr-6	3301:TGTAGCCGAAGAGTAGCCTTTATCGTATATGAGGATTATATTACCAGTTTGTGTTCTAGA 3301:TGTAGCCGAAGAGTAGCCTTTATCGTATATGAGGATTATATTACCAGTTTGTGTTCTAGA ***********************************	3360
BTx623 Dwarf white milo	3361:TATGTGATGATGAGCTTGTACTCTGTTTGAACTCCAAGATCCTCTTTGTAGACACTCCAA 3361:TATGTGATGATGAGCTTGTACTCTGTTTGAACTCCAAGATCCTCTTTTGTAGACACTCCAA	
Tall white sooner milo bmr-6	3361:TATGTGATGATGAGCTTGTACTCTGTTTGAACTCCAAGATCCTCTTTGTAGACACTCCAA 3361:TATGTGATGATGAGCTTGTACTCTGTTTGAACTCCAAGATCCTCTTTGTAGACACTCCAA ******************************	3420
BTx623 Dwarf white milo	3421:TCGTTCGCAGGAGCAGTGAAATGAAATATCGTTGGTACATTATTACAGGAGTTGTGTTTT 3421:TCGTTCGCAGGAGCAGTGAAATGAAATATCGTTGGTACATTATTACAGGAGTTGTGTTTT	
Tall white sooner milo bmr-6	3421:TCGTTCGCAGGAGCAGTGAAATGAAATATCGTTGGTACATTATTACAGGAGTTGTGTTTT 3421:TCGTTCGCAGGAGCAGTGAAATGAAATATCGTTGGTACATTATTACAGGAGTTGTGTTTT *************************	3480
BTx623 Dwarf white milo	3481:GGTCTTACTGATGATGTAGGCTGTGTTTGAATTTTGCAGCCTGCTGATTGGGAATCTTTG 3481:GGTCTTACTGATGATGTAGGCTGTGTTTGAATTTTGCAGCCTGCTGATTGGGAATCTTTG	3540
Tall white sooner milo bmr-6	3481:GGTCTTACTGATGATGTAGGCTGTGTTTGAATTTTGCAGCCTGCTGATTGGGAATCTTTG 3481:GGTCTTACTGATGATGTAGGCTGTGTTTGAATTTTGCAGCCTGCTGATTGGGAATCTTTG *********************************	3540
BTx623 Dwarf white milo	3541:TTCTTTTTATTTGCATGTCAGCAAGACAGCAACTTGTGTAACACAATCAAT	3600
Tall white sooner milo bmr-6	3541:TTCTTTTTATTTGCATGTCAGCAAGACAGCAACTTGTGTAACACAATCAAT	3600

BTx623 Dwarf white milo Tall white sooner milo bmr-6	3601:AGGTTCTTATATATACGCAAAGAAAGCAACAGCTGGTCGACGTCAAGAATATTTTGAA 3601:AGGTTCTTATATATACGCAAAGAAAGCAACAGCTGGTCGACGTCAAGAATATTTTGAA 3601:AGGTTCTTATATATACGCAAAGAAAGCAACAGCTGGTCGACGTCAAGAATATTTTGAA 3601:AGGTTCTTATATATATACGCAAAGAAAGCAACAGCTGGTCGACGTCAAGAATATTTTGAA *************************	3660 3660
BTx623 Dwarf white milo Tall white sooner milo bmr-6	3661:CTGTTTTTCACTTGTCGATGATTATTATTTATTCTGCTACATAAAAAAAA	3720 3720
BTx623 Dwarf white milo Tall white sooner milo bmr-6	3721:ATCTGCTGCTCCTCTGACGTAACGGAGAGACGTCACCTTTGCCGTTCAAACTAATCGGCG 3721:ATCTGCTGCTCCTCTGACGTAACGGAGAGACGTCACCTTTGCCGTTCAAACTAATCGGCG 3721:ATCTGCTGCTCCTCTGACGTAACGGAGAGACGTCACCTTTGCCGTTCAAACTAATCGGCG 3721:ATCTGCTGCTCCTCTGACGTAACGGAGAGACGTCACCTTTGCCGTTCAAACTAATCGGCG	3780 3780
BTx623 Dwarf white milo Tall white sooner milo bmr-6	3781:CCAACGCTCCTCCCGGCATGAGTATATTTGTTTTAGGTCTTGTTTAGTTCCAGAAAATTT 3781:CCAACGCTCCTCCCGGCATGAGTATATTTGTTTTAGGTCTTGTTTAGTTCCAGAAAATTT 3781:CCAACGCTCCTCCCGGCATGAGTATATTTGTTTTAGGTCTTTTAGTTCCAGAAAATTT 3781:CCAACGCTCCTCCCGGCATGAGTATATTTGTTTTAGGTCTTTTAGTTCCAGAAAATTT ******************************	3840 3840
BTx623 Dwarf white milo Tall white sooner milo bmr-6	3841:TGCAAATTGTTTCGGATTTCCCGTCACATCGAATCTTACGGTACATACA	3900 3900
BTx623 Dwarf white milo Tall white sooner milo bmr-6	3901:ATATAGACAAAAAAATAACTAATTACACAGTTTAGCAGTAATTTACGAGACGAATATTTG 3901:ATATAGACAAAAAAATAACTAATTACACAGTTTAGCAGTAATTTACGAGACGAATATTTG 3901:ATATAGACAAAAAAATAACTAATTACACAGTTTAGCAGTAATTTACGAGACGAATATTTG 3901:ATATAGACAAAAAAATAACTAATTACACAGTTTAGCAGTAATTTACGAGACGAATATTTG ******************************	3960 3960
BTx623 Dwarf white milo Tall white sooner milo bmr-6	3961:TCAAATACAAACGAAAGTGCTACAGTGTGCGTTTTGACAATTTTTTTGAAACTAAACAAG 3961:TCAAATACAAACGAAAGTGCTACAGTGTGCGTTTTGACAATTTTTTTT	4020 4020
BTx623 Dwarf white milo Tall white sooner milo bmr-6	4021:GCCTTAGTCTTCTATGCAATTTTGTGGAAGGCGCTCAAGAATAGCATTTTCAGCAAGGGT 4021:GCCTTAGTCTTCTATGCAATTTTGTGGAAGGCGCTCAAGAATAGCATTTTCAGCAAGGGT 4021:GCCTTAGTCTTCTATGCAATTTTGTGGAAGGCGCTCAAGAATAGCATTTTCAGCAAGGGT 4021:GCCTTAGTCTTCTATGCAATTTTGTGGAAGGCGCTCAAGAATAGCATTTTCAGCAAGGGT *********************************	4080 4080 4080
BTx623 Dwarf white milo Tall white sooner milo bmr-6	4081:AGCATTAGAAGAGGCTGTCATGAATAATGAAGATACAAGTATAAAAACAAAGTGAATATG 4081:AGCATTAGAAGAGGCTGTCATGAATAATGAAGATACAAGTATAAAAACAAAGTGAATATG 4081:AGCATTAGAAGAGGCTGTCATGAATAATGAAGATACAAGTATAAAAACAAAGTGAATATG 4081:AGCATTAGAAGAGGCTGTCATGAATAATGAAGATACAAGTATAAAAACAAAGTGAATATG ***************************	4140 4140 4140
BTx623 Dwarf white milo Tall white sooner milo bmr-6	4141:AAAGCCAGGGCTTGGTTTCGGTGATAATGCTTACGCTTTAAGAATTTTTCGCGTTTATTA 4141:AAAGCCAGGGCTTGGTTTCGGTGATAATGCTTACGCTTTAAGAATTTTTCGCGTTTATTA 4141:AAAGCCAGGGCTTGGTTTCGGTGATAATGCTTACGCTTTAAGAATTTTTCGCGTTTATTA 4141:AAAGCCAGGGCTTGGTTTCGGTGATAATGCTTACGCTTTAAGAATTTTTCGCGTTTATTA *******************************	4200 4200 4200
BTx623 Dwarf white milo Tall white sooner milo bmr-6	4201:GTCGATTAGATGTTACATTATCGTTAGGCAAACGTTTGCTGTGGTTTTTGGTGTCTTTTTA 4201:GTCGATTAGATGTTACATTATCGTTAGGCAAACGTTTGCTGTGGTTTTTGGTGTCTTTTTA 4201:GTCGATTAGATGTTACATTATCGTTAGGCAAACGTTTGCTGTGGTTTTTGGTGTCTTTTTA 4201:GTCGATTAGATGTTACATTATCGTTAGGCAAACGTTTGCTGTGGTTTTTGGTGTCTTTTTA	4260 4260 4260
BTx623 Dwarf white milo Tall white sooner milo bmr-6	4261:ATTGCATGCTGCTTATGTTAAGTAGTAGTATCCATCCTCTGTCATCCTGTTACAAAT 4261:ATTGCATGCTGCTTGCTTATGTTAAGTAGTATCCATCCTCTTGTCATCCTGTTACAAAT 4261:ATTGCATGCTGCTGCTTATGTTAAGTAGTAGTACCATCCTCTTGTCATCCTGTTACAAAT 4261:ATTGCATGCTGCTGCTTATGTTAAGTAGTAGTACCATCCTCTGTCATCCTGTTACAAAT *******************************	4320 4320 4320

rf white milo L white sooner milo	4321:GATCTGTTATTGTTGTTTTGTAATGGGCCTGTTTGGTTCCCTTCATTAAAACTTAGCTAC 4321:GATCTGTTATTGTTGTTTTGTAATGGGCCTGTTTGGTTCCCTTCATTAAAACTTAGCTAC 4321:GATCTGTTATTGTTGTTTTGTAATGGGCCTGTTTGGTTCCCTTCATTAAAACTTAGCTAC 4321:GATCTGTTATTGTTGTTTTGTAATGGGCCTGTTTGGTTCCCTTCATTAAAACTTAGCTAC ***********************************	4380 4380
rf white milo L white sooner milo	4381:TAAAACTATTTTAGCTACTCTTAGGTAACTAGTGGGACTAAAGTATTTTATCTTCTTTTT 4381:TAAAACTATTTTAGCTACTCTTAGGTAACTAGTGGGACTAAAGTATTTTATCTTCTTTTT 4381:TAAAACTATTTTAGCTACTCTTAGGTAACTAGTGGGACTAAAGTATTTTATCTTCTTTTT 4381:TAAAACTATTTTAGCTACTCTTAGGTAACTAGTGGGACTAAAGTATTTTATCTTCTTTTT **********************	4440 4440
rf white milo L white sooner milo	4441:AGTTAGTGTGTTTGAAAGTTTAGCTACTAAAGTGACTAAAGTTTAGCTGACTAAAATTTA 4441:AGTTAGTGTGTTTGAAAGTTTAGCTACTAAAGTGACTAAAGTTTAGCTGACTAAAATTTA 4441:AGTTAGTGTGTTTGAAAGTTTAGCTACTAAAGTGACTAAAGTTTAGCTGACTAAAATTTA 4441:AGTTAGTGTGTTTGAAAGTTTAGCTACTAAAGTGACTAAAGTTTAGCTGACTAAAATTTA ****************************	4500 4500
rf white milo L white sooner milo	4501:GTAAGGTGAACCAAACAGGCCCATTGTAAATAAAGGACTAGAATTTGTAACAATATAGGA 4501:GTAAGGTGAACCAAACAGGCCCCATTGTAAATAAAGGACTAGAATTTGTAACAATATAGGA 4501:GTAAGGTGAACCAAACAGGCCCCATTGTAAATAAAGGACTAGAATTTGTAACAATATAGGA 4501:GTAAGGTGAACCAAACAGGCCCCATTGTAAATAAAGGACTAGAATTTGTAACAATATAGGA ******************************	4560 4560
rf white milo L white sooner milo	4561:AGTCATAAGGAGTACCCCTAGCATTGTCAAGAGAGAGAGA	4620 4620
rf white milo L white sooner milo	4621:CTAGAAAAATACAGTCGTTTCCCCTCCTTATCTTTTGAAACCATAATACAAGTACAAATC 4621:CTAGAAAAATACAGTCGTTTCCCCTCCTTATCTTTTGAAACCATAATACAAGTACAAATC 4621:CTAGAAAAATACAGTCGTTTCCCCTCCTTATCTTTTGAAACCATAATACAAGTACAAATC 4621:CTAGAAAAATACAGTCGTTTCCCCTCCTTATCTTTTGAAACCATAATACAAGTACAAATC *******************************	4680 4680
rf white milo L white sooner milo	4681:CCACAGGCCCGTCACTGAGCGCCATCTCATGATTATGATCTTATAATTACTTCATGTAAA 4681:CCACAGGCCCGTCACTGAGCGCCATCTCATGATTATGATCTTATAATTACTTCATGTAAA 4681:CCACAGGCCCGTCACTGAGCGCCCATCTCATGATTATGATCTTAAATTACTTCATGTAAA 4681:CCACAGGCCCGTCACTGAGCGCCATCTCATGATTATGATCTTATAATTACTTCATGTAAA ********************************	4740 4740
rf white milo L white sooner milo	4741:CATGCCAAGACCTCACATTGGCACCCTTAATCCGGAATGTGATGCATAGTCCTTTGGACA 4741:CATGCCAAGACCTCACATTGGCACCCTTAATCCGGAATGTGATGCATAGTCCTTTGGACA 4741:CATGCCAAGACCTCACATTGGCACCCTTAATCCGGAATGTGATGCATAGTCCTTTGGACA 4741:CATGCCAAGACCTCACATTGGCACCCTTAATCCGGAATGTGATGCATAGTCCTTTGGACA **********************************	4800 4800
rf white milo L white sooner milo	4801:TCTGTGCTATGTACAAAGTTTCTTCCGAAGGCTCTGTGGCAGCATGATCCATCTATCCTC 4801:TCTGTGCTATGTACAAAGTTTCTTCCGAAGGCTCTGTGGCAGCATGATCCATCTATCCTC 4801:TCTGTGCTATGTACAAAGTTTCTTCCGAAGGCTCTGTGGCAGCATGATCCATCTATCCTC 4801:TCTGTGCTATGTACAAAGTTTCTTCCGAAGGCTCTGTGGCAGCATGATCCATCTATCCTC *************************	4860 4860
rf white milo L white sooner milo	4861:ATACCCCTATAGCAGCTAGTGTCTAGCTATTGGGCTTCTTGTTCCACCCAAATTCTCAAG 4861:ATACCCCTATAGCAGCTAGTGTCTAGCTATTGGGCTTCTTGTTCCACCCAAATTCTCAAG 4861:ATACCCCTATAGCAGCTAGTGTCTAGCTATTGGGCTTCTTGTTCCACCCAAATTCTCAAG 4861:ATACCCCTATAGCAGCTAGTGTCTAGCTATTGGGCTTCTTGTTCCACCCAAATTCTCAAG ***********************************	4920 4920
rf white milo L white sooner milo	4921:GTATGAAAACCTCTTGGTTGCAACTGATGACATCTTTGTCAGCTTTGGACCGTTACCCTC 4921:GTATGAAAACCTCTTGGTTGCAACTGATGACATCTTTGTCAGCTTTTGGACCGTTACCCTC 4921:GTATGAAAACCTCTTGGTTGCAACTGATGACATCTTTGTCAGCTTTTGGACCGTTACCCTC 4921:GTATGAAAACCTCTTGGTTGCAACTGATGACATCTTTGTCAGCTTTTGGACCGTTACCCTC *******************************	4980 4980
rf white milo L white sooner milo	4981:CTTGCCATATGTTCTGAGGTCTTGGTCCCGTGGGCCCACGTAGTCACATAGCATCGGCGA 4981:CTTGCCATATGTTCTGAGGTCTTGGTCCCGTGGGCCCACGTAGTCACATAGCATCGGCGA 4981:CTTGCCATATGTTCTGAGGTCTTGGTCCCGTGGGCCCACGTAGTCACATAGCATCGGCGA 4981:CTTGCCATATGTTCTGAGGTCTTGGTCCCGTGGGCCCACGTAGTCACATAGCATCGGCGA *********************************	5040 5040

BTx623 Dwarf white milo Tall white sooner milo bmr-6	5041:TACTGGTTCCATTCTCCTCATCTTCTACCTCAGCCTTAGCATCCGAGACAACCTTGTC 5041:TACTGGTTCCATTCTCCTCATCTTCTCTACCTCAGCCTTAGCATCCGAGACAACCTTGTC 5041:TACTGGTTCCATTCTCCTCATCTTCTCTACCTCAGCCTTAGCATCCGAGACAACCTTGTC 5041:TACTGGTTCCATTCTCCTCATCTTCTCTACCTCAGCCTTAGCATCCGAGACAACCTTGTC ********************************	5100 5100 5100
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5101:GGTGTCGTCTGAAGTTAAACTGGCGATTATCATTGATTCTGCGTTCTTGGGATCTTGTGT 5101:GGTGTCGTCTGAAGTTAAACTGGCGATTATCATTGATTCTGCGTTCTTGGGATCTTGTGT 5101:GGTGTCGTCTGAAGTTAAACTGGCGATTATCATTGATTCTGCGTTCTTGGGATCTTGTGT 5101:GGTGTCGTCTGAAGTTAAACTGGCGATTATCATTGATTCTGCGTTCTTGGGATCTTGTGT *******************************	5160 5160
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5161:GGCCAAGTCCGCATTGAGAACATCTTCGATTCGAGACATGACTGTGAAAGCTAAGCTCTC 5161:GGCCAAGTCCGCATTGAGAACATCTTCGATTCGAGACATGACTGTGAAAGCTAAGCTCTC 5161:GGCCAAGTCCGCATTGAGAACATCTTCGATTCGAGACATGACTGTGAAAGCTAAGCTCTC 5161:GGCCAAGTCCGCATTGAGAACATCTTCGATTCGAGACATGACTGTGAAAGCTAAGCTCTC *********************************	5220 5220 5220
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5221:CAGAGTCCTGGAGTAACTCTCCAAAATGGCAAGGCCAACATCCTGATGAAGAAAAAGGGT 5221:CAGAGTCCTGGAGTAACTCTCCAAAATGGCAAGGCCAACATCCTGATGAAGAAAAAGGGT 5221:CAGAGTCCTGGAGTAACTCTCCAAAATGGCAAGGCCAACATCCTGATGAAGAAAAAGGGT 5221:CAGAGTCCTGGAGTAACTCTCCAAAATGGCAAGGCCAACATCCTGATGAAGAAAAAGGGT **********************	5280 5280
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5281:AGAAGGGAGGTATGCAAATTATGCGAGTAAACAAAGCACTGTGGCGTATCTGAAAAGGCA 5281:AGAAGGGAGGTATGCAAATTATGCGAGTAAACAAAGCACTGTGGCGTATCTGAAAAGGCA 5281:AGAAGGGAGGTATGCAAATTATGCGAGTAAACAAAGCACTGTGGCGTATCTGAAAAGGCA 5281:AGAAGGGAGGTATGCAAATTATGCGAGTAAACAAAGCACTGTGGCGTATCTGAAAAGGCA ******************************	5340 5340
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5341:ATGTTAATTCTGAATGCTTTCTGTACCTTGTTGCATTGGATTTTGCTTATGTCTAGGGAC 5341:ATGTTAATTCTGAATGCTTTCTGTACCTTGTTGCATTGGATTTTGCTTATGTCTAGGGAC 5341:ATGTTAATTCTGAATGCTTTCTGTACCTTGTTGCATTGGATTTTGCTTATGTCTAGGGAC 5341:ATGTTAATTCTGAATGCTTTCTGTACCTTGTTGCATTGGATTTTGCTTATGTCTAGGGAC	5400 5400 5400
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5401:GACTGGGCGATGCCAGGAAATCTGTGCTTGATAAGGAGAAGAACATTCTCTGCCCTCCCT	5460 5460 5460
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5461:TCAAACATTCCCCTCTTCTCGTGACTGACGTTATGCCCCCACGACAATTTGCTGTCCTTG 5461:TCAAACATTCCCCTCTTCTCGTGACTGACGTTATGCCCCCACGACAATTTGCTGTCCTTG 5461:TCAAACATTCCCCTCTTCTCGTGACTGACGTTATGCCCCCACGACAATTTGCTGTCCTTG 5461:TCAAACATTCCCCTCTTCTCGTGACTGACGTTATGCCCCCACGACAATTTGCTGTCCTTG **************************	5520 5520
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5521:TGGGTCATTTTCTTCTGCCAGATGACTACTGAGGCTTCGACTCGGTTCTTCAGATCAACA 5521:TGGGTCATTTTCTTCTGCCAGATGACTACTGAGGCTTCGACTCGGTTCTTCAGATCAACA 5521:TGGGTCATTTTCTTCTGCCAGATGACTACTGAGGCTTCGACTCGGTTCTTCAGATCAACA 5521:TGGGTCATTTTCTTCTGCCAGATGACTACTGAGGCTTCGACTCGGTTCTTCAGATCAACA ********************************	5580 5580 5580
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5581:ATGTTGTGTTCATCCGACAAGTCTACAGAGCGTAGAAGTTCTTCAGGGTCAAAATAATCG 5581:ATGTTGTGTTCATCCGACAAGTCTACAGAGCGTAGAAGTTCTTCAGGGTCAAAATAATCG 5581:ATGTTGTGTTCATCCGACAAGTCTACAGAGCGTAGAAGTTCTTCAGGGTCAAAATAATCG 5581:ATGTTGTGTTCATCCGACAAGTCTACAGAGCGTAGAAGTTCTTCAGGGTCAAAATAATCG ************************************	5640 5640 5640
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5641:TCGGTTATAAGTTTGTACATTGAATCTCCAAGGGTGGACTTCCCATTCTAGCAGACATAT 5641:TCGGTTATAAGTTTGTACATTGAATCTCCAAGGGTGGACTTCCCATTCTAGCAGACATAT 5641:TCGGTTATAAGTTTGTACATTGAATCTCCAAGGGTGGACTTCCCATTCTAGCAGACATAT 5641:TCGGTTATAAGTTTGTACATTGAATCTCCAAGGGTGGACTTCCCATTCTAGCAGACATAT *********************************	5700 5700 5700
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5701:AACAAGAGAAGTTATAGAGTTATATTGTTAGAGCTGTTGTAAACAGAATATGGCAAGGCG 5701:AACAAGAGAAGTTATAGAGTTATATTGTTAGAGCTGTTGTAAACAGAATATGGCAAGGCG 5701:AACAAGAGAAGTTATAGAGTTATATTGTTAGAGCTGTTGTAAACAGAATATGGCAAGGCG 5701:AACAAGAGAAGTTATAGAGTTATATTGTTAGAGCTGTTGTAAACAGAATATGGCAAGGCG	5760 5760 5760

BTx623 Dwarf white milo Tall white sooner milo bmr-6	5761:GTTAGCAGACTGGTCTTATGGATCACCTTTGGTAGGGACTCCGTGTATGATTCAGGAACC 5761:GTTAGCAGACTGGTCTTATGGATCACCTTTGGTAGGGACTCCGTGTATGATTCAGGAACC 5761:GTTAGCAGACTGGTCTTATGGATCACCTTTGGTAGGGACTCCGTGTATGATTCAGGAACC 5761:GTTAGCAGACTGGTCTTATGGATCACCTTTGGTAGGGACTCCGTGTATGATTCAGGAACC *******************************	5820 5820
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5821:TCCATTTCCATGAGAATGTTAGCATTGATAGCCATTGCTGCCTTCAGCACCTGTGCAACA 5821:TCCATTTCCATGAGAATGTTAGCATTGATAGCCATTGCTGCCTTCAGCACCTGTGCAACA 5821:TCCATTTCCATGAGAATGTTAGCATTGATAGCCATTGCTGCCTTCAGCACCTGTGCAACA 5821:TCCATTTCCATGAGAATGTTAGCATTGATAGCCATTGCTGCCTTCAGCACCTGTGCAACA *********************************	5880 5880
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5881:AGTTCCTTCTGGTTCTGAAGCCATTTCCTGTATGCATCTGAGAGCCCATTAGGAGGAACC 5881:AGTTCCTTCTGGTTCTGAAGCCATTTCCTGTATGCATCTGAGAGCCCATTAGGAGGAACC 5881:AGTTCCTTCTGGTTCTGAAGCCATTTCCTGTATGCATCTGAGAGCCCATTAGGAGGAACC 5881:AGTTCCTTCTGGTTCTGAAGCCATTTCCTGTATGCATCTGAGAGCCCATTAGGAGGAACC *****************************	5940 5940
BTx623 Dwarf white milo Tall white sooner milo bmr-6	5941:CTGACAGTTGGGAGCCACCATTTGTCGTCCTGCCTCGGCATGTTTCCCTTCCCCGATTCA 5941:CTGACAGTTGGGAGCCACCATTTGTCGTCCTGCCTCGGCATGTTTCCCTTCCCCGATTCA 5941:CTGACAGTTGGGAGCCACCATTTGTCGTCCTGCCTCGGCATGTTTCCCTTCCCCGATTCA 5941:CTGACAGTTGGGAGCCACCATTTGTCGTCCTGCCTCGGCATGTTTCCCTTCCCCGATTCA **********************************	6000 6000
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6001:TCTGAATCTTTCTCACATACCAAAACTCCTGCTTACCCTCGAAACTGTCAAGGTATTCC 6001:TCTGAATCTTTCTTCACATACCAAAACTCCTGCTTACCCTCGAAACTGTCAAGGTATTCC 6001:TCTGAATCTTTCTTCACATACCAAAACTCCTGCTTACCCTCGAAACTGTCAAGGTATTCC 6001:TCTGAATCTTTCTTCACATACCAAAACTCCTGCTTACCCTCGAAACTGTCAAGGTATTCC *********************************	6060 6060
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6061:TATTCCACAGGAGACATATGCAATGCCACAAGTTAGAATTTTAGATATCCATCC	6120 6120
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6121:AGTCTGAACTGTTCAGTTCAGTAAATTATCAAGATAGAGCATGCCCGTGCTTACAAGGAG 6121:AGTCTGAACTGTTCAGTTCAGTAAATTATCAAGATAGAGCATGCCCGTGCTTACAAGGAG 6121:AGTCTGAACTGTTCAGTTCAGTAAATTATCAAGATAGAGCATGCCCGTGCTTACAAGGAG 6121:AGTCTGAACTGTTCAGTTCAGTAAATTATCAAGATAGAGCATGCCCGTGCTTACAAGGAG *******************************	6180 6180
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6181:CATTGCATCGAGCTTGCGCAACGCAGGGATGTTCATTTGTAGATCCTGACGCTGCTGAGT 6181:CATTGCATCGAGCTTGCGCAACGCAGGGATGTTCATTTGTAGATCCTGACGCTGCTGAGT 6181:CATTGCATCGAGCTTGCGCAACGCAGGGATGTTCATTTGTAGATCCTGACGCTGCTGAGT 6181:CATTGCATCGAGCTTGCGCAACGCAGGGATGTTCATTTGTAGATCCTGACGCTGCTGAGT **********************************	6240 6240
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6241:TATCATTATCTGTTTGACATGAAAACGCGTCAATTTAAGTTGGTTAACGCAGTGGTGTTT 6241:TATCATTATCTGTTTGACATGAAAACGCGTCAATTTAAGTTGGTTAACGCAGTGGTGTTT 6241:TATCATTATCTGTTTGACATGAAAACGCGTCAATTTAAGTTGGTTAACGCAGTGGTGTTT 6241:TATCATTATCTGTTTGACATGAAAACGCGTCAATTTAAGTTGGTTAACGCAGTGGTGTTT *****************************	6300 6300
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6301:AACGCTGTATTGTTGTATAACGAATTGGAAATGAAGCTGAATACTTGAATAGTACAGCAA 6301:AACGCTGTATTGTTGTATAACGAATTGGAAATGAAGCTGAATACTTGAATAGTACAGCAA 6301:AACGCTGTATTGTTGTATAACGAATTGGAAATGAAGCTGAATACTTGAATAGTACAGCAA 6301:AACGCTGTATTGTTGTATAACGAATTGGAAATGAAGCTGAATACTTGAATAGTACAGCAA ********************************	6360 6360
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6361:CAGCAAGTACTGAAATAGGGGGATTTTTTTTACCTCCATGCAGGTCCCATTCTCGGCGAC 6361:CAGCAAGTACTGAAATAGGGGGATTTTTTTTTACCTCCATGCAGGTCCCATTCTCGGCGAC 6361:CAGCAAGTACTGAAATAGGGGGATTTTTTTTTACCTCCATGCAGGTCCCATTCTCGGCGAC 6361:CAGCAAGTACTGAAATAGGGGGATTTTTTTTTACCTCCATGCAGGTCCCATTCTCGGCGAC ********************************	6420 6420
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6421:CTGCCGCGAAGGAACAATTCAACAATGTGATCGGAGACGGACAAAAGCCAGTCGATCTC 6421:CTGCCGCGCGAAGGAACAAATTCAACAATGTGATCGGAGACGGACAAAAGCCAGTCGATCTC 6421:CTGCCGCGAAGGAACAAATTCAACAATGTGATCGGAGACGGACAAAAGCCAGTCGATCTC 6421:CTGCCGCGAAGGAACAAATTCAACAATGTGATCGGAGACGACAAAAGCCAGTCGATCTC **********************************	6480 6480

BTx623 Dwarf white milo Tall white sooner milo bmr-6	6481:CTTCGTCCACCGCGATTTCTGGTCGGCGGCCATGGGCTGCAGACGACGCTGCTCACCAAA 6481:CTTCGTCCACCGCGATTTCTGGTCGGCGGCCATGGGCTGCAGACGACGCTGCTCACCAAA 6481:CTTCGTCCACCGCGATTTCTGGTCGGCGGCCATGGGCTGCAGACGACGCTGCTCACCAAA 6481:CTTCGTCCACCGCGATTTCTGGTCGGCGGCCATGGGCTGCAGACGACGCTGCTCACCAAA ******************************	6540 6540
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6541:CACAGAAGCTGAAAAGATGGCATCGCGAGAAAGAACGGGCAGTTGATCAGGGTTTCCACT 6541:CACAGAAGCTGAAAAGATGGCATCGCGACAAAGAACGGGCAGTTGATCAGGGTTTCCACT 6541:CACAGAAGCTGAAAAGATGGCATCGCGAGAAAGAACGGGCAGTTGATCAGGGTTTCCACT 6541:CACAGAAGCTGAAAAGATGGCATCGCGAGAAAGAACGGGCAGTTGATCAGGGTTTCCACT *******************************	6600 6600
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6601:AGAAATTGGGCAAAAGCTCAAATTGTGGAATTGCAGAAGGAAAAAAATGATGTTTAGAAA 6601:AGAAATTGGGCAAAAGCTCAAATTGTGGAATTGCAGAAGGAAAAAAATGATGTTTAGAAA 6601:AGAAATTGGGCAAAAGCTCAAATTGTGGAATTGCAGAAGGAAAAAAATGATGTTTAGAAA 6601:AGAAATTGGGCAAAAGCTCAAATTGTGGAATTGCAGAAGGAAAAAAATGATGTTTAGAAA *************	6660 6660
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6661:AATAAGGAAAGAGAGGATTCTTGGGTGGGGAATAAAAAAAA	6720 6720
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6721:GATTAGTGATGGCGTTGGACAGGGCAAGAGCAGAGGTCACCCCTTTGCCGGTGCCGGACA 6721:GATTAGTGATGGCGTTGGACAGGGCAAGAGCAGAGGTCACCCCTTTGCCGGTGCCGGACA 6721:GATTAGTGATGGCGTTGGACAGGGCAAGAGCAGAGGTCACCCCTTTGCCGGTGCCGGACA 6721:GATTAGTGATGGCGTTGGACAGGGCAAGAGCAGAGGTCACCCCTTTGCCGGTGCCGGACA *******************************	6780 6780
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6781:TGTCCTCCCCCAGCAGCAGCTTGGAGAACTTCTCCCTCACGATCTCCGCATCTGCAACCC 6781:TGTCCTCCCCCAGCAGCAGCTTGGAGAACTTCTCCCTCACGATCTCCGCATCTGCAACCC 6781:TGTCCTCCCCCAGCAGCAGCTTGGAGAACTTCTCCCTCACGATCTCCGCATCTGCAACCC 6781:TGTCCTCCCCCAGCAGCAGCTTGGAGAACTTCTCCCTCACGATCTCCGCATCTGCAACCC ********************************	6840 6840
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6841:ACAAACGCGAATCATTTCTCCAACAAGATTGCAATTTGCAGCAGCATAACGAGCGTTGGT 6841:ACAAACGCGAATCATTTCTCCAACAAGATTGCAATTTGCAGCAGCATAACGAGCGTTGGT 6841:ACAAACGCGAATCATTTCTCCAACAAGATTGCAATTTGCAGCAGCATAACGAGCGTTGGT 6841:ACAAACGCGAATCATTTCTCCAACAAGATTGCAATTTGCAGCAGCATAACGAGCGTTGGT *******************************	6900 6900
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6901:TGATGGTCCAAGAACAACCGTCACCTGAGGGCGGGCCCTCGTGCCGGACCGGCTTGGGCG 6901:TGATGGTCCAAGAACAACCGTCACCTGAGGGCGGGCCCTCGTGCCGGACCGGCTTGGGCG 6901:TGATGGTCCAAGAACAACCGTCACCTGAGGGCGGGCCCTCGTGCCGGACCGGCTTGGGCG 6901:TGATGGTCCAAGAACAACCGTCACCTGAGGGCGGGCCCTCGTGCCGGACCGGCTTGGGCG ***************************	6960 6960
BTx623 Dwarf white milo Tall white sooner milo bmr-6	6961:GCACCGCGAGCGAGGACGAGCTACCGGCTGCCCCCTTATCCGAAGGGCCACCGGCCAGCG 6961:GCACCGCGAGCGAGGACGAGCTACCGGCTGCCCCCTTATCCGAAGGGCCACCGGCCAGCG 6961:GCACCGCGAGCGAGGACGAGCTACCGGCTGCCCCCTTATCCGAAGGGCCACCGGCCAGCG 6961:GCACCGCGAGCGAGCGAGCTACCGGCTGCCCCCTTATCCGAAGGGCCACCGGCCAGCG ******************	7020 7020
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7021:GCGGCGGAAGGTCAACGGACAGCCGGCTCCCCTTGGACCCGCAGCTCCTCGACAGCGCCC 7021:GCGGCGGAAGGTCAACGGACAGCCGGCTCCCCTTGGACCCCGCAGCTCCTCGACAGCGCCC 7021:GCGGCGGAAGGTCAACGGACAGCCGGCTCCCCTTGGACCCCGCAGCTCCTCGACAGCGCCC 7021:GCGGCGGAAGGTCAACGGACAGCCGGCTCCCCTTGGACCCCGCAGCTCCTCGACAGCGCCC ****************************	7080 7080
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7081:GCCTGGTGCAAGGCTGCCCCGGCGCCCGCGCGCGCGCGCCTCCATCGAGGAGGCGGT 7081:GCCTGGTGCAAGGCTGCCCCGGCGCCGCGCGCGCGCGCTCCATCGACGAGGAGGCGT 7081:GCCTGGTGCAAGGCTGCCCCGGCGCCGCGCGCGCGCTGCGACTGCGCCTCCATCGAGGAGGCGT 7081:GCCTGGTGCAAGGCTGCCCCGGCGCCGCGCTGCGACTGCGCTTCCATCGAGGAGGCGT	7140 7140
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7141:CCGTGCCGTCTGAGGCCAGCGAGAGCGGCGACGACGACGACGACGACCTCCGGCGCCTGA 7141:CCGTGCCGTCTGAGGCCAGCGAGAGCGGCGACGACGACGACGACGCCGACCTCCGGCGCCTGA 7141:CCGTGCCGTCTGAGGCCAGCGAGAGCGGCGACGACGACGACGACGACCGCCG	7200 7200

BTx623 Dwarf white milo Tall white sooner milo bmr-6	7201:ACGAGAACCTTTCGAGGCCGTGGCCGATCTTCTGGAACGGCCGGGCCATCACGAGCGCAT 7201:ACGAGAACCTTTCGAGGCCGTGGCCGATCTTCTGGAACGGCCGGGCCATCACGAGCGCAT 7201:ACGAGAACCTTTCGAGGCCGTGGCCGATCTTCTGGAACGGCCGGGCCATCACGAGCGCAT 7201:ACGAGAACCTTTCGAGGCCGTGGCCGATCTTCTGGAACGGCCGGGCCATCACGAGCGCAT ************************************	7260 7260 7260
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7261:GGCTGGCACGCGCGCCCCGCTACGGCATCCGCAATGTCAACGTGGCGCCTTTTCTTTC	7320 7320 7320
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7321:TGGCAGAGAGAGAGGAGGGAGGCGGTGGCGCGCGGTGGCTGGC	7380 7380 7380
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7381:CTGTGTATGGGAGGTGAGGAGAGGGAGGGGCGGAGGGAGG	7440 7440 7440
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7441:GCGTGCGATCTGCTGGAAGGCTGCGGTTGCTGTTCGTGTTCGTGGGTGG	7500 7500 7500
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7501:GAATGTGGTTGGTTTCTCGGCTTTGCTTTGCCCCACGCCAAGCTTGGAAAACGGCAGCGT 7501:GAATGTGGTTGGTTTCTCGGCTTTGCTTTGCCCCACGCCAAGCTTGGAAAACGGCAGCGT 7501:GAATGTGGTTGGTTTCTCGGCTTTGCTTTGCCCCACGCCAAGCTTGGAAAACGGCAGCGT 7501:GAATGTGGTTGGTTTCTCGGCTTTGCTTTGCCCCACGCCAAGCTTGGAAAACGGCAGCGT	7560 7560 7560
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7561:TCCCGGCATGCAGCGCCAGGCTTTTTTATCGTGCGCGGCCGCCGGACTCCGTGCGGTCCG 7561:TCCCGGCATGCAGCGCCAGGCTTTTTTATCGTGCGCGGCCGCCGGACTCCGTGCGGTCCG 7561:TCCCGGCATGCAGCGCCAGGCTTTTTTATCGTGCGCGGCCGCCGGACTCCGTGCGGTCCG 7561:TCCCGGCATGCAGCGCCAGGCTTTTTTATCGTGCGCGGCCGCCGGACTCCGTGCGGTCCG *************************	7620 7620 7620
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7621:GCTGGCTGGCCGCCAAATATAAAGAGCACTGAGCACGGACGCCTTGATAGCACAGCACGG 7621:GCTGGCTGGCCGCCAAATATAAAGAGCACTGAGCACGGACGCCTTGATAGCACAGCACGG 7621:GCTGGCTGGCCGCCAAATATAAAGAGCACTGAGCACGGACGCCTTGATAGCACAGCACGG 7621:GCTGGCTGGCCGCCAAATATAAAGAGCACTGAGCACGGACGCCTTGATAGCACAGCACGG ***************************	7680 7680 7680
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7681:CGCCACGGCCTGCGAAATCTTCCGCTGCTGCGATAATGGCAGGAACCGTGCCGTGCA 7681:CGCCACGGCCTGCGAAATCTTCCGCTGCTGCGATAATGGCAGGAACCGTGCCGTGCA 7681:CGCCACGGCCTGCGAAATCTTCCGCTGCTGCGATAATGGCAGGAACCGTGCCGTGCA 7681:CGCCACGGCCTGCGAAATCTTCCGCTGCTGCGATAATGGCAGGAACCGTGCCGTGCA ************************************	7740 7740 7740
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7741:TGGTGGCGTTGGCCTCTCGTCCTGCTTGCGCTTGGCCCAGCTCTTAATCGGTGGATGAGT 7741:TGGTGGCGTTGGCCTCCGTCCTGCTTGCGCTTGGCCCAGCTCTTAATCGGTGGATGAGT 7741:TGGTGGCGTTGGCCTCCGTCCTGCTTGCGCTTGGCCCAGCTCTTAATCGGTGGATGAGT 7741:TGGTGGCGTTGGCCTCCGTCCTGCTTGCGCTTGGCCCAGCTCTTAATCGGTGGATGAGT ****************************	7800 7800 7800
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7801:ACAAATTCCTCATTGCCGTTACTTTTGCCTTTTGAAGAACGTTAGTTGAAACCATAATAT 7801:ACAAATTCCTCATTGCCGTTACTTTTGCCTTTTTGAAGAACGTTAGTTGAAACCATAATAT 7801:ACAAATTCCTCATTGCCGTTACTTTTGCCTTTTTGAAGAACGTTAGTTGAAACCATAATAT 7801:ACAAATTCCTCATTGCCGTTACTTTTGCCTTTTTGAAGAACGTTAGTTGAAACCATAATAT ***************************	7860 7860 7860
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7861:AGCAGTAAAAAGAAGCCAAATTCTGTAAGGTCTTGATGGAGTGGATTGAAATGATACTCT 7861:AGCAGTAAAAAGAAGCCAAATTCTGTAAGGTCTTGATGGAGTGGATTGAAATGATACTCT 7861:AGCAGTAAAAAGAAGCCAAATTCTGTAAGGTCTTGATGGAGTGGATTGAAATGATACTCT 7861:AGCAGTAAAAAGAAGCCAAATTCTGTAAGGTCTTGATGGAGTGGATTGAAATGATACTCT ********************************	7920 7920 7920

BTx623 Dwarf white milo Tall white sooner milo bmr-6	7921:AATCTACTTTAACATATATATAAATTAAGATAGATATATACGTATCCAAACAAGACAGTT 7921:AATCTACTTTAACATATATATAAATTAAGATAGATATATACGTATCCAAACAAGACAGTT 7921:AATCTACTTTAACATATATATATAAATTAAGATAGATATATACGTATCCAAACAAGACAGTT 7921:AATCTACTTTAACATATATATAAATTAAGATAGATATATACGTATCCAAACAAGACAGTT ***********************************	7980 7980
BTx623 Dwarf white milo Tall white sooner milo bmr-6	7981:TCCTCAACTAGGAGCTGGTAAATTTCAAGGTCGTAAGGAGAGCTCAAATTAGTTTGGTTG 7981:TCCTCAACTAGGAGCTGGTAAATTTCAAGGTCGTAAGGAGAGCTCAAATTAGTTTGGTTG 7981:TCCTCAACTAGGAGCTGGTAAATTTCAAGGTCGTAAGGAGAGCTCAAATTAGTTTGGTTG 7981:TCCTCAACTAGGAGCTGGTAAATTTCAAGGTCGTAAGGAGAGCTCAAATTAGTTTGGTTG ************************	8040 8040
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8041:GTTGCCGCAAAAACTCTGAATCTCTGCCTCGCCACCTTAATTTTTTTT	8100 8100
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8101:CCGTTCCAAAATAACTAAAGTTTGAGGTTTATTCTAAAATCAAACAATTTACCTTTTGTC 8101:CCGTTCCAAAATAACTAAAGTTTGAGGTTTATTCTAAAATCAAACAATTTACCTTTTGTC 8101:CCGTTCCAAAATAACTAAAGTTTGAGGTTTATTCTAAAATCAAACAATTTACCTTTTGTC 8101:CCGTTCCAAAATAACTAAAGTTTGAGGTTTATTCTAAAATCAAACAATTTACCTTTTGTC ******************************	8160 8160
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8161:TGCAAAAAAACCAATTTACCTTCGATCAAAATTATAAAGAACACCATCATTTATGGGACT 8161:TGCAAAAAAAACCAATTTACCTTCGATCAAAATTATAAAGAACACCATCATTTATGGGACT 8161:TGCAAAAAAACCAATTTACCTTCGATCAAAATTATAAAGAACACCATCATTTATGGGACT 8161:TGCAAAAAAACCAATTTACCTTCGATCAAAATTATAAAGAACACCATCATTTATGGGACT ************************************	8220 8220
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8221:AAATAGGTGCTGAAGTTTGGTTTATGCTGCTGCTTATGCTAATTTGTGTGAGAAGCATCA 8221:AAATAGGTGCTGAAGTTTGGTTTATGCTGCTGCTTATGCTAATTTGTGTGAGAAGCATCA 8221:AAATAGGTGCTGAAGTTTGGTTTATGCTGCTGCTTATGCTAATTTGTGTGAGAAGCATCA 8221:AAATAGGTGCTGAAGTTTGGTTTATGCTGCTGCTTATGCTAATTTGTGTGAGAAGCATCA **********************************	8280 8280
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8281:AGAGACGGTGGTTTTGTGCGCAGCACATTCCACTCGTTAATTTAGAATCAAACAATCCAC 8281:AGAGACGGTGGTTTTGTGCGCAGCACATTCCACTCGTTAATTTAGAATCAAACAATCCAC 8281:AGAGACGGTGGTTTTGTGCGCAGCACATTCCACTCGTTAATTTAGAATCAAACAATCCAC 8281:AGAGACGGTGGTTTTGTGCGCAGCACATTCCACTCGTTAATTTAGAATCAAACAATCCAC ************************	8340 8340
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8341:TCGTCAATCTCGTGCATTTTATTCATGTTCTCGTGCCCCTGTCACGGCCCAGACAGGTAC 8341:TCGTCAATCTCGTGCATTTTATTCATGTTCTCGTGCCCCTGTCACGGCCCAGACAGGTAC 8341:TCGTCAATCTCGTGCATTTTATTCATGTTCTCGTGCCCCTGTCACGGCCCAGACAGGTAC 8341:TCGTCAATCTCGTGCATTTTATTCATGTTCTCGTGCCCCTGTCACGGCCCAGACAGGTAC ************************************	8400 8400
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8401:AGCCCGGCAAAATCATGGGACGAGCCAAAAAAAAACTGGGCTAGGCCAGGCAGTGCAGGA 8401:AGCCCGGCAAAATCATGGGACGAGCCAAAAAAAAACTGGGCTAGGCCAGGCAGTGCAGGA 8401:AGCCCGGCAAAATCATGGGACGAGCCAAAAAAAAACTGGGCTAGGCCAGGCAGTGCAGGA 8401:AGCCCGGCAAAATCATGGGACGAGCCAAAAAAAAACTGGGCTAGGCCAGGCAGTGCAGGA *********************************	8460 8460
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8461:GAACTCGAAAAAACTGGGCCAGACATGTCATCCGTCCCGGCCCGACCCGTGCTTGAGCCC 8461:GAACTCGAAAAAACTGGGCCAGACATGTCATCCGTCCCGGCCCGACCCGTGCTTGAGCCC 8461:GAACTCGAAAAAACTGGGCCAGACATGTCATCCGTCCCGGCCCGACCCGTGCTTGAGCCC 8461:GAACTCGAAAAAACTGGGCCAGACATGTCATCCGTCCCGGCCCGACCCGTGCTTGAGCCC *********************************	8520 8520
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8521:AAACTCCCGGAACCCGATCTCCAGGTCCGCGGCGGCGACGAGCAGCTCGGCCGCCTGCGC 8521:AAACTCCCGGAACCCGATCTCCAGGTCCGCGGCGGCGACGAGCAGCTCGGCCGCCTGCGC 8521:AAACTCCCGGAACCCGATCTCCAGGTCCGCGGCGGCGACCAGCAGCTCGGCCGCCTGCGC 8521:AAACTCCCGGAACCCGATCTCCAGGTCCGCGGCGGCGAGCAGCAGCTCGGCCGCCTGCGC	8580 8580
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8581:GGGCTCCAGTATCTCCACCGCCCGCTTCACGGTGCGCAGCCGCAGCGCGCCCCGCCCTGTC 8581:GGGCTCCAGTATCTCCACCGCCCGCTTCACGGTGCGCAGCCGCAGCGCGCTCCGCCCTGTC 8581:GGGCTCCAGTATCTCCACCGCCCGCTTCACGGTGCGCAGCCGCAGCGCGCTCCGCCCTGTC 8581:GGGCTCCAGTATCTCCACCGCCCGCTTCACGGTGCGCAGCCGCAGCGGCCGCCCCTGTC ************************	8640 8640

BTx623 Dwarf white milo Tall white sooner milo bmr-6	8641:CAGCACGGCCCTGGCCGTGCGCACGAGGCCGGCCACGTCGAGAAGCCCGGACCCGTCCGC 8641:CAGCACGGCCCTGGCCGTGCGCACGAGGCCGGCCACGTCGAGAAGCCCGGACCCGTCCGC 8641:CAGCACGGCCCTGGCCGTGCGCACGAGGCCGGCCACGTCGAGAAGCCCGGACCCGTCCGC 8641:CAGCACGGCCCTGGCCGTGCGCACGAGGCCGGCCACGTCGAGAAGCCCGGACCCGTCCGC ******************************	8700 8700 8700
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8701:CGACGGAGCGGCCACGACGCCGTGGCCCTCCTGCACGAGCGCCATCTCCCGCGGAGCGC 8701:CGACGGAGCGCCACGACGCCGTGGCCCTCCTGCACGAGCGCCATCTCCCGCGCGAGCGC 8701:CGACGGAGCGGCCACGACGCCGTGGCCCTCCTGCACGAGCGCCATCTCCCGCGCGAGCGC 8701:CGACGGAGCGGCCACGACGCCGTGGCCCTCCTGCACGAGCGCCATCTCCCGCGCGAGCGC **************************	8760 8760
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8761:GTCCTCCTCGGCCACCGTGCGGCGCTGCAGGTCGTCGACCTGCGCCAGCTGCGCCGGGGT 8761:GTCCTCCTCGGCCACCGTGCGGCGCTGCAGGTCGTCGACCTGCGCCAGCTGCGCCGGGGT 8761:GTCCTCCTCGGCCACCGTGCGGCGCTGCAGGTCGTCGACCTGCGCCAGCTGCGCCGGGGT 8761:GTCCTCCTCGGCCACCGTGCGGCGCTGCAGGTCGTCGACCTGCGCCAGCTGCGCCGGGGT	8820 8820 8820
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8821:GAGGTCGCCCAGGTTCCCCGACCGCACGCCGAGGAGGAGGTCCGGCAGCTGCGCCTCGAG 8821:GAGGTCGCCCAGGTTCCCCGACCGCACGCCGAGGAGGAGGTCCGGCAGCTGCGCCTCGAG 8821:GAGGTCGCCCAGGTTCCCCGACCGCACGCCGAGGAGGAGGTCCGGCAGCTGCGCCTCGAG 8821:GAGGTCGCCCAGGTTCCCCGACCGCACGCCGAGGAGGAGGTCCGGCAGCTGCGCCTCGAG ***********************************	8880 8880 8880
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8881:GCGGCGCCCGGACTCGGTGTAGAGCAGGTGGACCAGCGTGGTGGGCCGCCACCCGGCGAG 8881:GCGGCGCCCCGGACTCGGTGTAGAGCAGGTGGACCAGCGTGGTGGGCCGCCACCCGGCGAG 8881:GCGGCGCCCCGGACTCGGTGTAGAGCAGGTGGACCAGCGTGGTGGGCCGCCACCCGGCGAG 8881:GCGGCGCCCCGGACTCGGTGTAGAGCAGGTGGACCAGCGTGGTGGGCCGCCACCCGGCGAG *********************	8940 8940 8940
BTx623 Dwarf white milo Tall white sooner milo bmr-6	8941:CCAGTACGCGGCGCCGCGCTCCGCGGGGGTGGCCCACGGCGCCGACAGCGTCCACACCGG 8941:CCAGTACGCGGCGCCGCGCTCCGCGGGGGTGGCCCACGGCGCCGACAGCGTCCACACCGG 8941:CCAGTACGCGGCGCCGCGCTCCGCGGGGGTGGCCCACGGCGCCGACAGCGTCCACACCGG 8941:CCAGTACGCGGCGCCGCGCTCCGCGGGGGTGGCCCACGGCGCCGACAGCGTCCACACCGG ******************************	9000 9000 9000
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9001:GTCCAGCCCCGCGCGCGCGCGCAGTAGGATTCCAGGTGGGCCACGAAGCGGCCCACAAG 9001:GTCCAGCCCCGCGCGCGCGCGCGCAGTAGGATTCCAGGTGGGCCACGAAGCGGCCCACAAG 9001:GTCCAGCCCCGCGCGCGCGCGCGCAGTAGGATTCCAGGTGGGCCACGAAGCGGCCCACAAG 9001:GTCCAGCCCCGCGCGCGCGCGCAGTAGGATTCCAGGTGGGCCACGAAGCGGCCCACAAG *****************	9060 9060 9060
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9061:AGCGGGGAGCTGGGCCGCCGCGTCGTCCGACCACCGGGCCGACGCCAGGTCCCGGCGCAG 9061:AGCGGGGAGCTGGGCCGCCGCGTCGTCCGACCACCGGGCCGACGCCAGGTCCCGGCGCAG 9061:AGCGGGGAGCTGGGCCGCGCGTCGTCCGACCACCGGGCCGACGCCAGGTCCCGGCGCAG 9061:AGCGGGGAGCTGGGCCGCCGCGTCGTCCGACCACCGGGCCGACGCCAGGTCCCGCGCAG ******************************	9120 9120 9120
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9121:CGAGCGCAGCCCGCGGAACCAGAGGTGGAAGCGCCGGGTCGCCGCCTCAAGCTCCAGCTC 9121:CGAGCGCAGCCCGCGGAACCAGAGGTGGAAGCGCCGGGTCGCCGCCTCAAGCTCCAGCTC 9121:CGAGCGCAGCCCGCGGAACCAGAGGTGGAAGCGCCGGGTCGCCGCCTCAAGCTCCAGCTC 9121:CGAGCGCAGCCCGCGGAACCAGAGGTGGAAGCGCCGGGTCGCCGCCTCAAGCTCCAGCTC ***********************************	9180 9180 9180
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9181:CATTCCCGCCGCCGCCGCACAGGCAGGCAGGCAGGCAGGC	9240 9240 9240
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9241:AACGACGACGACGACGACGACGACGAAGAAGCGTGGGCGGTGGGATTTATAGGGTGCGGC 9241:AACGACGACGACGACGACGACGACGAAGAAGCGTGGGCGGTGGGATTTATAGGGTGCGGC 9241:AACGACGACGACGACGACGACGACGAAGAAGCGTGGGCGGTGGGATTTATAGGGTGCGGC 9241:AACGACGACGACGACGACGACGAAGAAGCGTGGGCGGTGGGATTTATAGGGTGCGGC ******************************	9300 9300 9300
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9301:CGTGGAGTGGAGGCGATCGGACGACGGACGGACGGCTGCGGGCTGAGCGTATGAGGTGTC 9301:CGTGGAGTGGAGGCGATCGGACGACGGACGGACGGCTGCGGGCTGAGCGTATGAGGTGTC 9301:CGTGGAGTGGAGGCGATCGGACGACGGACGGACGGCTGCGGGCTGAGCGTATGAGGTGTC 9301:CGTGGAGTGGAGGCGATCGGACGACGGACGGACGGCTGCGGGCTGAGGGTATGAGGTGTC	9360 9360 9360

BTx623 Dwarf white milo Tall white sooner milo bmr-6	9361:GCGAGGTGGCGCGCATGCAGGGGGCCATGTGTGCCACGAGCACTGGCCGTGTGGTTCTGG 9361:GCGAGGTGGCGCGCATGCAGGGGGCCATGTGTGCCACGAGCACTGGCCGTGTGGTTCTGG 9361:GCGAGGTGGCGCGCATGCAGGGGGCCATGTGTGCCACGAGCACTGGCCGTGTGGTTCTGG 9361:GCGAGGTGGCGCGCATGCAGGGGGCCATGTGTGCCACGAGCACTGGCCGTGTGGTTCTGG *********************	9420 9420
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9421:ACGGCGACGCCGTCACGCCGGCGACGCGCGGGTGGGCTGGGGTGACATGTGGCCCGAGGT 9421:ACGGCGACGCCGTCACGCCGGCGACGCGCGGGTGGGCTGGGGTGACATGTGGCCCGAGGT 9421:ACGGCGACGCCGTCACGCCGGCGACGCGCGGGTGGGCTGGGGTGACATGTGGCCCGAGGT 9421:ACGGCGACGCCGTCACGCCGGCGACGCGCGGGTGGGCTGGGGTGACATGTGGCCCGAGGT **********************************	9480 9480
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9481:GCCAATGGGTTTACCGTCTACTGTAGAGGTGTCGCGACGCGCCGACTGGTTGGT	9540 9540
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9541:CCAGGGGTCAGCTGTTTTGTTGATGACGCGAGGTGACGGTGACGGTGACGGTGACGGAAG 9541:CCAGGGGTCAGCTGTTTTGTTGATGACGCGAGGTGACGGTGACGGTGACGGTGACGGAAG 9541:CCAGGGGTCAGCTGTTTTGTTGATGACGCGAGGTGACGGTGACGGTGACGGTGACGGAAG 9541:CCAGGGGTCAGCTGTTTTGTTGATGACGCGAGGTGACGGTGACGGTGACGGTGACGGAAG *******************************	9600 9600
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9601:AGCTACTGGTGGCCTTGGAGCGCAGAAGTTTGGGCTGTCATTTTTGGGTTGGATCCCATC 9601:AGCTACTGGTGGCCTTGGAGCGCAGAAGTTTGGGCTGTCATTTTTTGGGTTGGATCCCATC 9601:AGCTACTGGTGGCCTTGGAGCGCAGAAGTTTGGGCTGTCATTTTTTGGGTTGGATCCCATC 9601:AGCTACTGGTGGCCTTGGAGCGCAGAAGTTTGGGCTGTCATTTTTTGGGTTGGATCCCATC *******************************	9660 9660
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9661:GCATCCCATCTGGATGCCTGCAGATATTTTGCACTGGACGACGGTATTGAATCATGTGTG 9661:GCATCCCATCTGGATGCCTGCAGATATTTTGCACTGGACGACGGTATTGAATCATGTGTG 9661:GCATCCCATCTGGATGCCTGCAGATATTTTGCACTGGACGACGGTATTGAATCATGTGTG 9661:GCATCCCATCTGGATGCCTGCAGATATTTTGCACTGGACGACGGTATTGAATCATGTGTG ********************************	9720 9720
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9721:TTACTGTTATTGCACAAGCTCAAAAAAAAAGTGTGTGACTGTTCACTCAGGTTTGCTGGAA 9721:TTACTGTTATTGCACAAGCTCAAAAAAAAAGTGTGTGACTGTTCACTCAGGTTTGCTGGAA 9721:TTACTGTTATTGCACAAGCTCAAAAAAAAAGTGTGTGACTGTTCACTCAGGTTTGCTGGAA 9721:TTACTGTTATTGCACAAGCTCAAAAAAAAAGTGTGTGACTGTTCACTCAGGTTTGCTGGAA **********************************	9780 9780
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9781:ACAGGAGAGTCATCTCGGCCTCATCTTGTTTTATAATAGTTGGAGCTGTGGATAGTGCTG 9781:ACAGGAGAGTCATCTCGGCCTCATCTTGTTTTATAATAGTTGGAGCTGTGGATAGTGCTG 9781:ACAGGAGAGTCATCTCGGCCTCATCTTGTTTTATAATAGTTGGAGCTGTGGATAGTGCTG 9781:ACAGGAGAGTCATCTCGGCCTCATCTTGTTTTATAATAGTTGGAGCTGTGGATAGTGCTG *********************************	9840 9840
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9841:TCTGCTAGTGCTGTGCTGTGCTCCCAAGATCAGGTTTCTGAATTTCTACTTTCCGGTAGG 9841:TCTGCTAGTGCTGTGCTGCTCCCAAGATCAGGTTTCTGAATTTCTACTTTCCGGTAGG 9841:TCTGCTAGTGCTGTGCTGCTCCCAAGATCAGGTTTCTGAATTTCTACTTTCCGGTAGG 9841:TCTGCTAGTGCTGTGCTGCTCCCAAGATCAGGTTTCTGAATTTCTACTTTCCGGTAGG *********************************	9900 9900
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9901:TATCAATAATGGAGGTTTTATTTGCCTGGCTGCCGGCCATGGCGATCGGCCGCGCGCG	9960 9960
BTx623 Dwarf white milo Tall white sooner milo bmr-6	9961:CATTAGTAGAATCTTTGTTTCGTCCTCGCGTGTCTCGTTCCTGTCCCAGGAACCTCAAAA 9961:CATTAGTAGAATCTTTGTTTCGTCCTCGCGTGTCTCGTTCCTGTCCCAGGAACCTCAAAA 9961:CATTAGTAGAATCTTTGTTTCGTCCTCGCGTGTCTCGTTCCTGTCCCAGGAACCTCAAAA 9961:CATTAGTAGAATCTTTGTTTCGTCCTCGCGTGTCTCGTTCCTGTCCCAGGAACCTCAAAA *****************************	10020 10020
Dwarf white milo Tall white sooner milo	10021:GCGGAGGATACGTGTATATCTTGCCAGAACACCAGCACCTTCAGAGTTTCAGACACATGA 10021:GCGGAGGATACGTGTATATCTTGCCAGAACACCAGCACCTTCAGAGTTTCAGACACATGA 10021:GCGGAGGATACGTGTATATCTTGCCAGAACACCAGCACCTTCAGAGTTTCAGACACATGA 10021:GCGGAGGATACGTGTATATCTTGCCAGAACACCAGCACCTTCAGAGTTTCAGACACATGA ***********************************	10080 10080

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10081:TGGTGCAATGCAACGGGTGGTAGAAATCGTCGGTTCACGAGGATTACTAGTACTATTCCT 10140
BTx623
Dwarf white milo
                    10081:TGGTGCAATGCAACGGGTGGTAGAAATCGTCGGTTCACGAGGATTACTAGTACTATTCCT 10140
Tall white sooner milo 10081:TGGTGCAATGCAACGGGTGGTAGAAATCGTCGGTTCACGAGGATTACTAGTACTATTCCT 10140
                    10081:TGGTGCAATGCAACGGGTGGTAGAAATCGTCGGTTCACGAGGATTACTAGTACTATTCCT 10140
bmr-6
BTx623
                    Dwarf white milo
                    bmr-6
                    **********************
BTx623
                    10201:ACGATGCTGGGCGATGCACAAAGGTTGCATAGCAGCAGTATGCACAGCGACACAGCCTGC 10260
                    10201:ACGATGCTGGGCGATGCACAAAGGTTGCATAGCAGCAGTATGCACAGCGACACAGCCTGC 10260
Dwarf white milo
Tall white sooner milo 10201:ACGATGCTGGGCGATGCACAAAGGTTGCATAGCAGCAGTATGCACAGCGACACAGCCTGC 10260
bmr-6
                    10201:ACGATGCTGGGCGATGCACAAAGGTTGCATAGCAGCAGTATGCACAGCGACACAGCCTGC 10260
BTx623
                    10261:AGGGGCATCCCGTCTTGCCAAGTTAGCTTCCTTCCGCGGTCGAAAGCACCTCCAGCTCGG 10320
Dwarf white milo
                    10261:AGGGGCATCCCGTCTTGCCAAGTTAGCTTCCTTCCGCGGTCGAAAGCACCTCCAGCTCGG 10320
Tall white sooner milo 10261:AGGGGCATCCCGTCTTGCCAAGTTAGCTTCCTTCCGCGGTCGAAAGCACCTCCAGCTCGG 10320
bmr-6
                    10261:AGGGGCATCCCGTCTTGCCAAGTTAGCTTCCTTCCGCGGTCGAAAGCACCTCCAGCTCGG 10320
BTx623
                    10321:CCCACCAGAGCGGAGACAGCCTCGGCGTCGCAGCGACCGGCGAGATACCGATGGCTTCTC 10380
Dwarf white milo
                    10321:CCCACCAGAGCGGAGACAGCCTCGGCGTCGCAGCGACCGGCGAGATACCGATGGCTTCTC 10380
Tall white sooner milo 10321:CCCACCAGAGCGGAGACAGCCTCGGCGTCGCAGCGACCGGCGAGATACCGATGGCTTCTC 10380
bmr-6
                    10321:CCCACCAGAGCGGAGACAGCCTCGGCGTCGCAGCGACCGGCGAGATACCGATGGCTTCTC 10380
                    10381:TCAGCCTGGCAGCGACCTCCCTCATGCTCGGTCTGTTTCTGGGATCGCTCTGGATGCAGG 10440
BTx623
                    10381:TCAGCCTGGCAGCGACCTCCCTCATGCTCGGTCTGTTTCTGGGATCGCTCTGGATGCAGG 10440
Dwarf white milo
Tall white sooner milo 10381:TCAGCCTGGCAGCGACCTCCCTCATGCTCGGTCTGTTTCTGGGATCGCTCTGGATGCAGG 10440
bmr-6
                    10381:TCAGCCTGGCAGCGACCTCCCTCATGCTCGGTCTGTTTCTGGGATCGCTCTGGATGCAGG 10440
BTx623
                    10441:CACGGATCACCTCGCCGATGACTGCTAGCTCATCTTCCCTGTGAATGTGATCGCACAGTG 10500
                    10441:CACGGATCACCTCGCCGATGACTGCTAGCTCATCTTCCCTGTGAATGTGATCGCACAGTG 10500
Dwarf white milo
Tall white sooner milo 10441:CACGGATCACCTCGCCGATGACTGCTAGCTCATCTTCCCTGTGAATGTGATCGCACAGTG 10500
bmr-6
                    10441:CACGGATCACCTCGCCGATGACTGCTAGCTCATCTTCCCTGTGAATGTGATCGCACAGTG 10500
                    10501:TTGGATCCAGCAAGGAGGCTATACTCCGGTCATCGTTGGCTATGCACTCCAGAGCCTAGG 10560
BTx623
Dwarf white milo
                    10501:TTGGATCCAGCAAGGAGGCTATACTCCGGTCATCGTTGGCTATGCACTCCAGAGCCTAGG 10560
Tall white sooner milo 10501:TTGGATCCAGCAAGGAGGCTATACTCCGGTCATCGTTGGCTATGCACTCCAGAGCCTAGG 10560
                    10501:TTGGATCCAGCAAGGAGGCTATACTCCGGTCATCGTTGGCTATGCACTCCAGAGCCTAGG 10560
bmr-6
                    10561:AAAGAAGAAGAAATACAACGTCATCATTTGATTTTTTTTCATCATCAACAACTAGAAA 10620
BTx623
Dwarf white milo
                    10561:AAAGAAGAAGAAATACAACGTCATCATTTGATTTTTTTTCATCATCAACAAGTAGAAA 10620
10561:AAAGAAGAAGAATACAACGTCATCATTTGATTTTTTTTTCATCATCAACTAAGTAGAAA 10620
bmr-6
                    10621:TGATGTTTCATCGATAGCGTCGTCATTACCGAGCTCACGAGGGAGCGCTCGTGTCCGGGG 10680
BTx623
Dwarf white milo
                    10621:TGATGTTTCATCGATAGCGTCGTCATTACCGAGCTCACGAGGGAGCGCTCGTGTCCGGGG 10680
Tall white sooner milo 10621:TGATGTTTCATCGATAGCGTCGTCATTACCGAGGGAGCGCTCGTGTCCGGGG 10680
                    10621:TGATGTTTCATCGATAGCGTCGTCATTACCGAGCTCACGAGGGAGCGCTCGTGTCCGGGG 10680
bmr-6
BTx623
                    10681:TATGGAAATGGAAGTTTCCCTGAGATGATTTCAAGCAGTAGAACACCGAAGCTATGTACA 10740
                    10681:TATGGAAATGGAAGTTTCCCTGAGATGATTTCAAGCAGTAGAACACCGAAGCTATGTACA 10740
Dwarf white milo
Tall white sooner milo 10681:TATGGAAATGGAAGTTTCCCTGAGATGATTCCAAGCAGTAGAACACCGAAGCTATGTACA 10740
bmr-6
                    10681:TATGGAAATGGAAGTTTCCCTGAGATGATTTCAAGCAGTAGAACACCGAAGCTATGTACA 10740
BTx623
                    10741:TTCCCTGCTAACCCAGCGGACACCTGTTCTTGGTGATGGTCGAGCTCGCCATTCGTCGCC 10800
Dwarf white milo
                    10741:TTCCCTGCTAACCCAGCGGACACCTGTTCTTGGTGATGGTCGAGCTCGCCATTCGTCGCC 10800
Tall white sooner milo 10741:TTCCCTGCTAACCCAGCGGACACCTGTTCTTGGTGATGGTCGAGCTCGCCATTCGTCGCC 10800
                    10741:TTCCCTGCTAACCCAGCGGACACCTGTTCTTGGTGATGGTCGAGCTCGCCATTCGTCGCC 10800
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10801:GTTTTGGCTTCAGAAATCACTTCATGCCAAACGCTCATGTCCGCTATCTGCAGGAACAAC 10860
BTx623
Dwarf white milo
                      10801:GTTTTGGCTTCAGAAATCACTTCATGCCAAACGCTCATGTCCGCTATCTGCAGGAACAAC 10860
Tall white sooner milo 10801:GTTTTGGCTTCAGAAATCACTTCATGCCAAACGCTCATGTCCGCTATCTGCAGGAACAAC 10860
                      10801:GTTTTGGCTTCAGAAATCACTTCATGCCAAACGCTCATGTCCGCTATCTGCAGGAACAAC 10860
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BTx623
                      10861:TCAGGTCTCAGGGTGGATCAAGTTGCAGTTCCTTCACACTGATGCTAACACAGCATGGTT 10920
Dwarf white milo
                      10861:TCAGGTCTCAGGGTGGATCAAGTTGCAGTTCCTTCACACTGATGCTAACACAGCATGGTT 10920
Tall white sooner milo 10861:TCAGGTCTCAGGGTGGATCAAGTTGCAGTTCCTTCACACTGATGCTAACACAGCATGGTT 10920
bmr-6
                      10861:TCAGGTCTCAGGGTGGATCAAGTTGCAGTTCCTTCACACTGATGCTAACACAGCATGGTT 10920
                            *********************
BTx623
                      10921:GTTGACACCAAGAGGTTTCAAAATTTGGTAAAACTCAGGGAGTGATAATATGAAGTTGGG 10980
                      10921:GTTGACACCAAGAGGTTTCAAAATTTGGTAAAACTCAGGGAGTGATAATATGAAGTTGGG 10980
Dwarf white milo
Tall white sooner milo 10921:GTTGACACCAAGAGGTTTCAAAATTTGGTAAAACTCAGGGAGTGATAATATGAAGTTGGG 10980
bmr-6
                      10921:GTTGACACCAAGAGGTTTCAAAATTTGGTAAAACTCAGGGAGTGATAATATGAAGTTGGG 10980
BTx623
                      10981:TAGGACAAACAAAAGAAAAGAAAACATTAACCAAGACTAGCCTTATAGCCTTATGGAACTG 11040
Dwarf white milo
                      10981:TAGGACAAACAAAAGAAAAGAAAACATTAACCAAGACTAGCCTTATAGCCTTATGGAACTG 11040
Tall white sooner milo 10981:TAGGACAAACAAAGAAAGAAAAGAAAACATTAACCAAGACTTATAGCCTTATGGAACTG 11040
bmr-6
                      10981:TAGGACAAACAAAAGAAAAGAAAACATTAACCAAGACTAGCCTTATAGCCTTATGGAACTG 11040
BTx623
                      11041:GGATGGGAGTGTGTACCTTTGCAGCACCATCTTCAGATAGCAGTATGGAACTGGACTGAA 11100
Dwarf white milo
                      11041:GGATGGGAGTGTGTACCTTTGCAGCACCATCTTCAGATAGCAGTATGGAACTGGACTGAA 11100
Tall white sooner milo 11041:GGATGGGAGTGTGTACCTTTGCAGCACCATCTTCAGATAGCAGTATGGAACTGGACTGAA 11100
bmr-6
                      11041:GGATGGGAGTGTGTACCTTTGCAGCACCATCTTCAGATAGCAGTATGGAACTGGACTGAA 11100
                      11101:GATCAGGGTGCACCACAGGAGGGCTGAGCTCATGCATGTGCTGGATGCAGTATGCTAGTC 11160
BTx623
Dwarf white milo
                      11101:GATCAGGGTGCACCACAGGAGGGCTGAGCTCATGCATGTGCTGGATGCAGTATGCTAGTC 11160
Tall white sooner milo 11101:GATCAGGGTGCACCACAGGAGGGCTGAGCTCATGCATGTGCTGGATGCAGTATGCTAGTC 11160
                      11101:GATCAGGGTGCACCACAGGAGGGCTGAGCTCATGCATGTGCTGGATGCAGTATGCTAGTC 11160
                      11161:CCATGATAATCCGCATCCTACCTCGCCAAGCGATGTGCTCAAAATCCTCAGCTGCAACAA 11220
BTx623
Dwarf white milo
                      11161:CCATGATAATCCGCATCCTACCTCGCCAAGCGATGTGCTCAAAATCCTCAGCTGCAACAA 11220
Tall white sooner milo 11161:CCATGATAATCCGCATCCTACCTCGCCAAGCGATGTGCTCAAAATCCTCAGCTGCAACAA 11220
bmr-6
                      11161:CCATGATAATCCGCATCCTACCTCGCCAAGCGATGTGCTCAAAATCCTCAGCTGCAACAA 11220
                      11221:GTTTGCAGAATTGTTAATTACTCGTACACAATATTTACAGAGCTACATGTACAGTTCAAT 11280
BTx623
                      11221:GTTTGCAGAATTGTTAATTACTCGTACACAATATTTACAGAGCTACATGTACAGTTCAAT 11280
Dwarf white milo
Tall white sooner milo 11221:GTTTGCAGAATTGTTAATTACTCGTACACAATATTTACAGAGCTACATGTACAGTTCAAT 11280
                      11221:GTTTGCAGAATTGTTAATTACTCGTACACAATATTTACAGAGCTACATGTACAGTTCAAT 11280
bmr-6
BTx623
                      11281:GGTATGGTTGAATTAGCAAGAACAGTTTCTATATACCATGAAGACTCTCATGAAGTGTCC 11340
Dwarf white milo
                      11281:GGTATGGTTGAATTAGCAAGAACAGTTTCTATATACCATGAAGACTCTCATGAAGTGTCC 11340
Tall white sooner milo 11281:GGTATGGTTGAATTAGCAAGAACAGTTTCTATATACCATGAAGACTCTCATGAAGTGTCC 11340
                      11281:GGTATGGTTGAATTAGCAAGAACAGTTTCTATATACCATGAAGACTCTCATGAAGTGTCC 11340
bmr-6
                      11341:CATTCGGCGCGTACTCGAGCACCATCATCCTGGTGAAAGGTTCCTCCTCCTCACAGAAGC 11400
BTx623
Dwarf white milo
                      11341:CATTCGGCGCGTACTCGAGCACCATCATCCTGGTGAAAGGTTCCTCCTCCTCACAGAAGC 11400
Tall white sooner milo 11341:CATTCGGCGCGTACTCGAGCACCATCATCCTGGTGAAAGGTTCCTCCTCCTCACAGAAGC 11400
                      11341:CATTCGGCGCGTACTCGAGCACCATCATCCTGGTGAAAGGTTCCTCCTCCTCACAGAAGC 11400
bmr-6
BTx623
                      11401:CAAGCAGATTGATGAAGTTCTTGTGGTTTATTCGCGACAGGGTGTCTATCTGCTCAATTC 11460
                      11401:CAAGCAGATTGATGAAGTTCTTGTGGTTTATTCGCGACAGGGTGTCTATCTGCTCAATTC 11460
Dwarf white milo
Tall white sooner milo 11401:CAAGCAGATTGATGAAGTTCTTGTGGTTTATTCGCGACAGGGTGTCTATCTGCTCAATTC 11460
bmr-6
                      11401:CAAGCAGATTGATGAAGTTCTTGTGGTTTATTCGCGACAGGGTGTCTATCTGCTCAATTC 11460
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BTx623
                      11461:ATCATTAAAGTAATTCAAGCTAATATGCAAATACACAAACTCAAATGGGTGTGTTGTTCA 11520
Dwarf white milo
                      11461:ATCATTAAAGTAATTCAAGCTAATATGCAAATACACAAACTCAAATGGGTGTGTTGTTCA 11520
Tall white sooner milo 11461:ATCATTAAAGTAATTCAAGCTAATATGCAAATACACAAACTCAAATGGGTGTGTTGTTCA 11520
                      11461:ATCATTAAAGTAATTCAAGCTAATATGCAAATACACAAACTCAAATGGGTGTTGTTCA 11520
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BTx623
                   11521:CATATATCTAAATAATGGGCCAAATTCTGATGATAACCTTTCTCCTGAAGCAGGTCTCT 11580
Dwarf white milo
                   11521:CATATATCTAAATAAATGGGCCAAATTCTGATGATAACCTTTCTCCTGAAGCAGGTCTCT 11580
Tall white sooner milo 11521:CATATATCTAAATAAATGGGCCAAATTCTGATGATAACCTTTCTCCTGAAGCAGGTCTCT 11580
                   11521:CATATATCTAAATAATGGGCCAAATTCTGATGATAACCTTTCTCCTGAAGCAGGTCTCT 11580
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BTx623
                   11581:GAATGCTCTGACCACTCCTTGCTCGATGTAATCATAGTGGACACCACGGCGATCTCAACC 11640
Dwarf white milo
                   11581:GAATGCTCTGACCACTCCTTGCTCGATGTAATCATAGTGGACACCACGGCGATCTCAACC 11640
Tall white sooner milo 11581:GAATGCTCTGACCACTCCTTGCTCGATGTAATCATAGTGGACACCACGGCGATCTCAACC 11640
                   11581:GAATGCTCTGACCACTCCTTGCTCGATGTAATCATAGTGGACACCACGGCGATCTCAACC 11640
bmr-6
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BTx623
                   11641:CCAGTTGACAAAGTTCCCTTGTAGACGGTGTAGTGTGGGTAGCTCGCCACGATGTTACTG 11700
                   11641:CCAGTTGACAAAGTTCCCTTGTAGACGGTGTAGTGTGGGTAGCTCGCCACGATGTTACTG 11700
Dwarf white milo
Tall white sooner milo 11641:CCAGTTGACAAAGTTCCCTTGTAGACGGTGTAGTGTGGGTAGCTCGCCACGATGTTACTG 11700
bmr-6
                   11641:CCAGTTGACAAAGTTCCCTTGTAGACGGTGTAGTGTGGGTAGCTCGCCACGATGTTACTG 11700
BTx623
                   11701:AAGTCCTCACAGGCACGTTCCAGCTCTGAACGCTGCAACTTTGGTACTCCTGATGAAGCA 11760
Dwarf white milo
                   11701:AAGTCCTCACAGGCACGTTCCAGCTCTGAACGCTGCAACTTTGGTACTCCTGATGAAGCA 11760
Tall white sooner milo 11701:AAGTCCTCACAGGCACGTTCCAGCTCTGAACGCTGCAACTTTGGTACTCCTGATGAAGCA 11760
bmr-6
                   11701:AAGTCCTCACAGGCACGTTCCAGCTCTGAACGCTGCAACTTTGGTACTCCTGATGAAGCA 11760
BTx623
                   11761:ATGAGAATCAGCTGGGTTAATTGCAACAAGCAGCAGCTTAAGTTGTACTAGATATCTGAA 11820
Dwarf white milo
                   11761:ATGAGAATCAGCTGGGTTAATTGCAACAAGCAGCAGCTTAAGTTGTACTAGATATCTGAA 11820
Tall white sooner milo 11761:ATGAGAATCAGCTGGGTTAATTGCAACAAGCAGCTTAAGTTGTACTAGATATCTGAA 11820
bmr-6
                   11761:ATGAGAATCAGCTGGGTTAATTGCAACAAGCAGCAGCTTAAGTTGTACTAGATATCTGAA 11820
                   BTx623
Dwarf white milo
                   BTx623
                   11881:GTACAGATTTTTTTAAAAAAAAGGGGGGATGTAAAATAATTTTGAGCACATATATGAAG 11940
                   11881:GTACAGATTTTTTTAAAAAAAAGGGGGGATGTAAAATAATTTTGAGCACATATATGAAG 11940
Dwarf white milo
Tall white sooner milo 11881:GTACAGATTTTTTTAAAAAAAAAGGGGGGATGTAAAATAATTTTGAGCACATATATGAAG 11940
bmr-6
                   11881:GTACAGATTTTTTTAAAAAAAAGGGGGGATGTAAAATAATTTTGAGCACATATATGAAG 11940
                   BTx623
                   Dwarf white milo
bmr-6
BTx623
                   12001:TTTCTGCAGCTGGCCACTGAGTCCAGTCTTCCAAGGGCCAATGGTCGCAACCGCACTCTT 12060
Dwarf white milo
                   12001:TTTCTGCAGCTGGCCACTGAGTCCAGTCTTCCAAGGGCCAATGGTCGCAACCGCACTCTT 12060
Tall white sooner milo 12001:TTTCTGCAGCTGGCCACTGAGTCCAGTCTTCCAAGGGCCAATGGTCGCAACCGCACTCTT 12060
                   12001:TTTCTGCAGCTGGCCACTGAGTCCAGTCTTCCAAGGGCCAATGGTCGCAACCGCACTCTT 12060
bmr-6
                   12061:ACGACAAAGAAGCCAGCCAGCTAGTCCAGCAAGCAACAGCAGGGCAAGCGCCGGAAGAAC 12120
BTx623
Dwarf white milo
                   12061:ACGACAAAGAAGCCAGCACGCTAGTCCAGCAAGCAACAGCAGGGCAAGCGCCGGAAGAAC 12120
Tall white sooner milo 12061:ACGACAAGAAGCCAGCACGCTAGTCCAGCAAGCAACCAGCGCAGGCCAGGCCGGAAGAAC 12120
                   12061:ACGACAAAGAAGCCAGCACGCTAGTCCAGCAAGCAACAGCAGGGCAAGCGCCGGAAGAAC 12120
bmr-6
BTx623
                   12121:AACCATGTAGAGCCACCTCATAGATCTCGACAAATAAGCCGCCGGCGTCGTTGGTGCCGC 12180
                   12121:AACCATGTAGAGCCACCTCATAGATCTCGACAAATAAGCCGCCGGCGTCGTTGGTGCCGC 12180
Dwarf white milo
Tall white sooner milo 12121:AACCATGTAGAGCCACCTCATAGATCTCGACAAATAAGCCGCCGGCGTCGTTGGTGCCGC 12180
bmr-6
                   12121:AACCATGTAGAGCCACCTCATAGATCTCGACAAATAAGCCGCCGGCGTCGTTGGTGCCGC 12180
BTx623
                   12181:CTCGCTCGGATCGTTCTGCCCCCCGTGTCGACTGGGAGACGCCGCCGGAAAAGAGCCGGT 12240
Dwarf white milo
                   12181:CTCGCTCGGATCGTTCTGCCCCCCGTGTCGACTGGGAGACGCCGCCGGAAAAGAGCCCGT 12240
Tall white sooner milo 12181:CTCGCTCGGATCGTTCTGCCCCCCGTGTCGACTGGGAGACGCCGCCGGAAAAGAGCCGGT 12240
                   12181:CTCGCTCGGATCGTTCTGCCCCCCGTGTCGACTGGGAGACGCCGCCGGAAAAGAGCCCGT 12240
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BTx623
Dwarf white milo
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BTx623
                   12301:CGCGGCGAGATTTGTGTGTCCTGCTGAAGTAGCCTCCGATGGCTCGGCTGCGCCGC 12360
Dwarf white milo
                   12301:CGCGGCGAGATTTGTGGTGTCCTGCTGAAGTAGCACCCCCGATGGCTCGGCTGCGCCGC 12360
Tall white sooner milo 12301:CGCGGCGAGATTTGTGGTGTCCTGCTGAAGTAGCCTCCGATGGCTCGGCTGCGCCGC 12360
bmr-6
                   12301:CGCGGCGAGATTTGTGGTGTCCTGCTGAAGTAGCCTCCGATGGCTCGGCTGCGCCGC 12360
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BTx623
                   12361:CGGCAGATCCGCGGCGGTCATGGCAGAATGGAGGGTCAACATGACCAGCACGAGGGAACT 12420
                   12361:CGGCAGATCCGCGGCGGTCATGGCAGAATGGAGGGTCAACATGACCAGCACGAGGGAACT 12420
Dwarf white milo
Tall white sooner milo 12361:CGGCAGATCCGCGGCGGTCATGGCAGAATGGAGGGTCAACATGACCAGCACGAGGGAACT 12420
bmr-6
                   12361:CGGCAGATCCGCGGCGGTCATGGCAGAATGGAGGGTCAACATGACCAGCACGAGGAACT 12420
BTx623
                   12421:CGACGCGTCCATCGTTCGTCGGCGTGCCCAAAGATCGGTCGCATCAGATGAGCAGATAGC 12480
Dwarf white milo
                   12421:CGACGCGTCCATCGTTCGTCGGCGTGCCCAAAGATCGGTCGCATCAGATGAGCAGATAGC 12480
Tall white sooner milo 12421:CGACGCGTCCATCGTTCGTCGGCGTGCCCAAAGATCGGTCGCATCAGATGAGCAGATAGC 12480
bmr-6
                   12421:CGACGCGTCCATCGTTCGTCGGCGTGCCCAAAGATCGGTCGCATCAGATGAGCAGATAGC 12480
BTx623
                   12481:CTCTACGCGCTGCGTGCCCTCCCCTGAGAAAAAAAAAGGGATATGGCAGAATCATCGGCG 12540
Dwarf white milo
                  12481:CTCTACGCGCTGCGTGCCCTCCCCTGAGAAAAAAAAAGGGATATGGCAGAATCATCGGCG 12540
Tall white sooner milo 12481:CTCTACGCGCTGCGTGCCCTCCCCTGAGAAAAAAAAGGGATATGGCAGAATCATCGGCG 12540
bmr-6
                   12481:CTCTACGCGCTGCGTGCCCTCCCCTGAGAAAAAAAAAGGGATATGGCAGAATCATCGGCG 12540
                   12541:TCGTCAGGGCTGCATGTTTTGAAGCATTAGAGATACTAGTAGAACACTGGATAAAAAAAG 12600
BTx623
                   12541:TCGTCAGGGCTGCATGTTTTGAAGCATTAGAGATACTAGTAGAACACTGGATAAAAAAAG 12600
Dwarf white milo
Tall white sooner milo 12541:TCGTCAGGGCTGCATGTTTTGAAGCATTAGAGATACTAGTAGAACACTGGATAAAAAAAG 12600
bmr-6
                   12541:TCGTCAGGGCTGCATGTTTTGAAGCATTAGAGATACTAGTAGAACACTGGATAAAAAAAG 12600
BTx623
                  Dwarf white milo
bmr-6
                   12661:GACAACTGATCGAAGAAACATGATTGATGAGAGGAAGCAGGGTAGATTGAGAGCTTACAG 12720
BTx623
Dwarf white milo
                   12661:GACAACTGATCGAAGAAACATGATTGATGAGAGGAAGCAGGGTAGATTGAGAGCTTACAG 12720
Tall white sooner milo 12661:GACAACTGATCGAAGAAACATGATTGATGAGAGGAAGCAGGGTAGATTGAGAGCTTACAG 12720
                  12661:GACAACTGATCGAAGAAACATGATTGATGAGAGGAAGCAGGGTAGATTGAGAGCTTACAG 12720
bmr-6
BTx623
                   12721:TGTGAACGAAACGAAGAGGAAGACGATGACGAGGGAAGGGTCGGAGTTGCTTCGTGGCGG 12780
Dwarf white milo
                   12721:TGTGAACGAAACGAAGAGAAGACGATGACGAGGGAAGGGTCGGAGTTGCTTCGTGGCGG 12780
Tall white sooner milo 12721:TGTGAACGAAGCGAAGGGGAGGATGACGAGGGAAGGGTCGGAGTTGCTTCGTGGCGG 12780
                  12721:TGTGAACGAAACGAAGAGGAAGACGATGACGAGGGAAGGGTCGGAGTTGCTTCGTGGCGG 12780
bmr-6
                  12781:TAGTAGTTGGAGGAGCCAATAACACACACTTTTCTTTGTTACCAGTGACAAAGAAAAAAT 12840
BTx623
Dwarf white milo
                   12781:TAGTAGTTGGAGGAGCCAATAACACACACTTTTCTTTGTTACCAGTGACAAAGAAAAAAT 12840
Tall white sooner milo 12781:TAGTAGTTGGAGGAGCCAATAACACACACTTTTCTTTGTTACCAGTGACAAAGAAAAAAT 12840
                   12781:TAGTAGTTGGAGGAGCCAATAACACACACTTTTCTTTGTTACCAGTGACAAAGAAAAAAT 12840
bmr-6
BTx623
                   12841:GGGGGACTGCTTTGCTTGATTGAGATTAACGACTACTAGAGCGAAACCGGCAATCCCGTT 12900
                   12841:GGGGGACTGCTTTGCTTGATTGAGATTAACGACTACTAGAGCGAAACCGGCAATCCCGTT 12900
Dwarf white milo
Tall white sooner milo 12841:GGGGGACTGCTTTGCTTGATTGAGATTAACGACTACTAGAGCGAAACCGGCAATCCCGTT 12900
bmr-6
                  12841:GGGGGACTGCTTTGCTTGATTGAGATTAACGACTACTAGAGCGAAACCGGCAATCCCGTT 12900
                        ******************************
BTx623
                   12901:GCTCGTCGCAGTTGCAGTTGCGGACAGCGTCACAGTTTTGTCAACGAAGCGTTCAATAAC 12960
Dwarf white milo
                  12901:GCTCGTCGCAGTTGCAGTTGCGGACAGCGTCACAGTTTTGTCAACGAAGCGTTCAATAAC 12960
Tall white sooner milo 12901:GCTCGTCGCAGTTGCAGTTGCGGACAGCGTCACAGTTTTGTCAACGAAGCGTTCAATAAC 12960
                   12901:GCTCGTCGCAGTTGCAGTTGCGGACAGCGTCACAGTTTTGTCAACGAAGCGTTCAATAAC 12960
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12961:TGGGGCTGGGGGAATAAAGAACAGCACCCGAGGGACGGAGCCCACTGCCCACCGCTATCG 13020
BTx623
Dwarf white milo
                  12961:TGGGGCTGGGGGAATAAAGAACAGCACCCGAGGGACGGAGCCCACTGCCCACCGCTATCG 13020
Tall white sooner milo 12961:TGGGGCTGGGGGAATAAAGAACAGCACCCGAGGGACGGAGCCCACTGCCCACCGCTATCG 13020
                  12961:TGGGGCTGGGGGAATAAAGAACAGCACCCGAGGGACGGAGCCCACTGCCCACCGCTATCG 13020
                       ********************
BTx623
                  Dwarf white milo
                  Tall white sooner milo 13021:TCTATCGATCTCGTCCATGGCACGGCTCGCGTGTCCGCACTGGCACTGGCACGTAGCTC 13080
bmr-6
                  *********************
BTx623
                  13081:CTTGTCATGGCGCGCCGCCACGGACGCGTAGCGTTTTTTTAGAAAATCGCAGCTGCCGTC 13140
                  13081:CTTGTCATGGCGCGCCGCCACGGACGCGTAGCGTTTTTTTAGAAAATCGCAGCTGCCGTC 13140
Dwarf white milo
Tall white sooner milo 13081:CTTGTCATGGCGCGCCGCCACGGACGCTTTTTTTTAGAAAATCGCAGCTGCCGTC 13140
bmr-6
                  ********************
BTx623
                  13141:GTACTGGGGCGCCGGCCAGCTCAGCCACGTGAACGGTGAACCTAGAGTGCGTAACGA 13200
Dwarf white milo
                  13141:GTACTGGGGCGCCGGCCGGCAAGTCAGCCACGTGAACGGTGAACCTAGAGTGCGTAACGA 13200
Tall white sooner milo 13141:GTACTGGGGCGCCGGCCAGTCAGTCAGCCACGTGAACGGTGAACCTAGAGTGCGTAACGA 13200
bmr-6
                  13141:GTACTGGGGCGCCGGCCGGCAAGTCAGCCACGTGAACGGTGAACCTAGAGTGCGTAACGA 13200
BTx623
                  13201:ACCAGAAACTAGTCCAGAATCTGCGTCGCAGTCGCAGCTTGCCCGAAACAAAGACCGCGC 13260
Dwarf white milo
                  13201:ACCAGAAACTAGTCCAGAATCTGCGTCGCAGTCGCAGCTTGCCCGAAACAAAGACCGCGC 13260
Tall white sooner milo 13201:ACCAGAAACTAGTCCAGAATCTGCGTCGCAGTCGCAGCTTGCCCGAAACAAAGACCGCGC 13260
bmr-6
                  13201:ACCAGAAACTAGTCCAGAATCTGCGTCGCAGTCGCAGCTTGCCCGAAACAAGACCGCGC 13260
BTx623
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Dwarf white milo
                  13261:GTGCAAAAGCAAGAACCCACCGGGCCGCGCTCGCCGAAAACTTGTCCGTGACTAGCGCCG 13320
Tall white sooner milo 13261:GTGCAAAAGCAAGAACCCACCGGGCCGCTCGCCGAAAACTTGTCCGTGACTAGCGCCG 13320
                  13261:GTGCAAAAGCAAGAACCCACCGGGCCGCCGCCGCCGAAAACTTGTCCGTGACTAGCGCCG 13320
BTx623
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Dwarf white milo
Tall white sooner milo 13321:CGACGACGGCGACCTTGGGGACGGGATGGACTCGAGAACCCATCGATTTCGATTT 13380
bmr-6
                  13321:CGACGACGGCGACCTTGGGGACGGGATGGACTCGAGAACCCATCGATTTCGATTT 13380
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BTx623
                  13381:TCGATTTCGATTTCTAGCGGGGTTTGCGGCGCCAGAGGCCGTGCCGACGGCGCGACGCCG 13440
Dwarf white milo
Tall white sooner milo 13381:TCGATTTCGATTTCTAGCGGGGGTTTGCGGCGCCGAGGGCCGTGCCGACGCGCGGCGCGCG 13440
                  bmr-6
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BTx623
Dwarf white milo
                  13441:AACGCGGCACACCCCCCACGCCTGCGCCTCGGCGCGCGGGGAGGAAACGGCCGGAGGC 13500
Tall white sooner milo 13441:AACGCGGCACACCCCCCACGCCTGCGCCTCGGCGCGCGGGGGGAAACGGCCGGAGGC 13500
                  13441:AACGCGGCACACCCCCCACGCCTGCGCCTCGGCGCGCGGGGAGGAAACGGCCGGAGGC 13500
bmr-6
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BTx623
Dwarf white milo
                  13501:TACTATAGCCGTTGCGGCTGGTCCCCCTGAGCAAGTCGTCGGTTTCGGCAGGCGCGGGG 13560
Tall white sooner milo 13501:TACTATAGCCGTTGCGGCTGGTCCCCTGAGCAAGTCGTCGGTTTCGGCAGGCGCGGG 13560
                  13501:TACTATAGCCGTTGCGGCTGGTCCCCCTGAGCAAGTCGTCGGTTTCGGCAGGCGCGGGG 13560
bmr-6
BTx623
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                  13561:GTCGAGACCGCGAGGCGCCGAGACCCCGAGGTCTGCTGCACTCTGCTACGGGGCGCGCTCA 13620
Dwarf white milo
Tall white sooner milo 13561:GTCGAGACCGCGAGGCGCCGAGGCCCCGAGGTCTGCTGCTGCTGCTACGGGGCGCGTCA 13620
bmr-6
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BTx623
                  Dwarf white milo
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BTx623
Dwarf white milo
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BTx623
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Dwarf white milo
                 13741:GTTTCTTGCCCGTTGGCAGTAGAGCCAGCCAGGTAAAGATAACTGGAGTCTACACCGTCA 13800
Tall white sooner milo 13741:GTTTCTTGCCCGTTGGCAGTAGAGCCAGCCAGGTAAAGATAACTGGAGTCTACACCGTCA 13800
bmr-6
                 13741:GTTTCTTGCCCGTTGGCAGTAGAGCCAGCCAGGTAAAGATAACTGGAGTCTACACCGTCA 13800
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                 13801:AAACTCTTTTGTTTGCCACACATCCTGTTGCGTAGATTGGCTGCATATATTTGTTGGTAG 13860
BTx623
                 13801:AAACTCTTTTGTTTGCCACACATCCTGTTGCGTAGATTGGCTGCATATATTTGTTGGTAG 13860
Dwarf white milo
Tall white sooner milo 13801:AAACTCTTTTGTTTGCCACACATCCTGTTGCGTAGATTGGCTGCATATATTTGTTGGTAG 13860
bmr-6
                 13801:AAACTCTTTTGTTTGCCACACATCCTGTTGCGTAGATTGGCTGCATATATTTGTTGGTAG 13860
BTx623
                 13861:TTGGTGAGGCTTATAATATATGATCGATCATTGTCACGGTATGGATAGAAATGGAGAGGA 13920
Dwarf white milo
                 13861:TTGGTGAGGCTTATAATATATGATCGATCATTGTCACGGTATGGATAGAAATGGAGAGGA 13920
Tall white sooner milo 13861:TTGGTGAGGCTTATAATATATGATCGATCATTGTCACGGTATGGATAGAAATGGAGAGA 13920
bmr-6
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BTx623
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Dwarf white milo
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Tall white sooner milo 13921:AGGATTCACTGGCTTGCAGTCTTGCACAAGACAAAGGCGATACTGACTAAACGTGAATGT 13980
bmr-6
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BTx623
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Dwarf white milo
                 13981:TAGATAAGTATTCCAGCGATGACAGCGACAAACGCGAGGCATTGACTTGGAGCAGTGCTA 14040
Tall white sooner milo 13981:TAGATAAGTATTCCAGCGATGACAGCGACAAACGCGAGGCATTGACTTGGAGCAGTGCTA 14040
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BTx623
                 Dwarf white milo
                 bmr-6
                 14101:TTCCATCCAAAATCCGAAAAAAAAATTCAAGATTTTTCATTATATCGAATCTTTGAATAC 14160
BTx623
                 14101:TTCCATCCAAAATCCGAAAAAAAAATTCAAGATTTTTCATTATATCGAATCTTTGAATAC 14160
Dwarf white milo
Tall white sooner milo 14101:TTCCATCCAAAATCCGAAAAAAAAAATTCAAGATTTTTCATTATATCGAATCTTTGAATAC 14160
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BTx623
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Dwarf white milo
                 14161:ATATATGGAGCATTAAATATAGACAAAATAAAAACTAATTATACAGTTTATTTGTAATTC 14220
Tall white sooner milo 14161:ATATATGGAGCATTAAATATAGACAAAATAAAAACTAATTATACAGTTTATTTGTAATTC 14220
bmr-6
                 14161:ATATATGGAGCATTAAATATAGACAAAATAAAAACTAATTATACAGTTTATTTGTAATTC 14220
                 14221:ACGGGATGAATCTTTTAAGCCTATTTAGTCCATAATTAGATAACATTCAAATACAAA 14280
BTx623
Dwarf white milo
                 14221:ACGGGATGAATCTTTTAAGCCTATTTAGTCCATAATTAGATAACTTTCAAATACAAA 14280
Tall white sooner milo 14221:ACGGGATGAATCTTTTAAGCCTATTTAGTCCATAATTAGATAATAACTTTCAAATACAAA 14280
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bmr-6
BTx623
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Dwarf white milo
Tall white sooner milo 14281:TGTAAGTGCTACAGTGTCTCGAAAAATTCGAGAAAACTAAACATGGCCACACTATGGC 14340
bmr-6
                 14281:TGTAAGTGCTACAGTGTCTCGAAAAATTCGAGAAGAAACTAAACATGGCCACACTATGGC 14340
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BTx623
                 Dwarf white milo
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14401:AATAAATCAACGAATAAAACTTTTAGCCAATTTTTCAGACATGTTGTAAAGGAATCTTAA 14460
BTx623
                      14401:AATAAATCAACGAATAAAACTTTTAGCCAATTTTTCAGACATGTTGTAAAGGAATCTTAA 14460
Dwarf white milo
Tall white sooner milo 14401:AATAAATCAACGAATAAAACTTTTTAGCCAATTTTTCAGACATGTTGTAAAGGAATCTTAA 14460
                      BTx623
                      14461:TTGTTCATTCATGTGTGCATATGGACATAGTGGTGGAACTTTAGTCTCATTTTAGCCTTG 14520
Dwarf white milo
                      14461:TTGTTCATTCATGTGTGCATATGGACATAGTGGTGGAACTTTAGTCTCATTTTAGCCTTG 14520
Tall white sooner milo 14461:TTGTTCATTCATGTGTGCATATGGACATAGTGGTGGAACTTTAGTCTCATTTTAGCCTTG 14520
bmr-6
                      14461:TTGTTCATTCATGTGTGCATATGGACATAGTGGTGGAACTTTAGTCTCATTTTAGCCTTG 14520
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BTx623
                      14521:TTTAGTTCATTATCAGATTTTTTTTGGCTAATGTAGCACTTTCGTTTGTATTTGACAATT 14580
                      14521:TTTAGTTCATTATCAGATTTTTTTTGGCTAATGTAGCACTTTCGTTTGTATTTGACAATT 14580
Dwarf white milo
Tall white sooner milo 14521:TTTAGTTCATTATCAGATTTTTTTTGGCTAATGTAGCACTTTCGTTTGTATTTGACAATT 14580
bmr-6
                      14521:TTTAGTTCATTATCAGATTTTTTTTGGCTAATGTAGCACTTTCGTTTGTATTTGACAATT 14580
BTx623
                      14581:ATTGTTCAATCATGAATTAACTAGGTTTAAAAGTTTCGTCTCACAAATTGCAGGTAAACT 14640
Dwarf white milo
                      14581:ATTGTTCAATCATGAATTAACTAGGTTTAAAAGTTTCGTCTCACAAATTGCAGGTAAACT 14640
Tall white sooner milo 14581:ATTGTTCAATCATGAATTAACTAGGTTTAAAAGTTTCGTCTCACAAATTGCAGGTAAACT 14640
bmr-6
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BTx623
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Dwarf white milo
                      14641:ATGCAATTAGTTATTTTTATCTATATTTAAAGCTCTATGCATATGCAACAAGATTTGAT 14700
Tall white sooner milo 14641:ATGCAATTAGTTATTTTTTATCTATATTTAAAGCTCTATGCAATAGCAACAAGATTTGAT 14700
bmr-6
                      14641:ATGCAATTAGTTATTTTTATCTATATTTAAAGCTCTATGCATATGCAACAAGATTTGAT 14700
BTx623
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Dwarf white milo
                      14701:GTGATGAATTTTTTTAAAAAAATATTAGATTTTAGGTGAAACTAAACAAGTCCTTAGTA 14760
Tall white sooner milo 14701:GTGATGAATTTTTTTAAAAAAAAATATTAGATTTTAGGTGAAACTAAACAAGTCCTTAGTA 14760
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BTx623
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Dwarf white milo
                      14761:GTTGAAGTGGATGTCATTTTTAGATATGAAAGCCCTTTGCTCCCGCTTCACTATAT 14820
Tall white sooner milo 14761:GTTGAAGTGGATGATGTCATTTTTAGATATGAAAGCCCTTTGCTCTCCGCTTCACTATAT 14820
bmr-6
                      14761:GTTGAAGTGGATGTCATTTTTAGATATGAAAGCCCTTTGCTCTCCGCTTCACTATAT 14820
                      14821:CTAATGTGAGAAGAGAAAGAAACTCCATGCGTGTGTGCTCGCGATGACAGCCGTGTGG 14880
BTx623
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Dwarf white milo
Tall white sooner milo 14821:CTAATGTGAGAAGAGAAAGAAACTCCATGCGTGTGTGCTCGCGATGACAGCCGTGTGG 14880
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bmr-6
BTx623
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Dwarf white milo
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Tall white sooner milo 14881:CAGGGTCAGAGCGTGAAAGAAGAGGGGAGCCTGACAAAGCCCTTTTTATATAAGTTAATTA 14940
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bmr-6
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BTx623
Dwarf white milo
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Tall white sooner milo 14941:CGAGAAATTATTCAAGACATACGTTTTCTCTTTCTCTACTTTTTTTAGTCGTTTCAAATA 15000
bmr-6
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BTx623
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Dwarf white milo
Tall white sooner milo 15001:CTTACTGATTTATCAAGTGTACGGCCAGAGTGTGAAAGAGGGAAGCCTGACAAAGCCC 15060
bmr-6
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BTx623
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Dwarf white milo
                      15061:TTTTTTATATCTAAGTTAATTACGAGAAATCACTCGAGACACGTTTTCTCTTTA 15120
Tall white sooner milo 15061:TTTTTTATATCTAAGTTAATTACGAGAAATCACTCGAGACACACGTTTTCTCTTTA 15120
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bmr-6
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BTx623
                  15121:ATTTTTTTAGCTGTTTCAAATACTTGATTTATCAAGTGTGTTTTTAGAGAGGTGCTTCAA 15180
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Dwarf white milo
Tall white sooner milo 15121:ATTTTTTTAGCTGTTTCAAATACTTGATTTATCAAGTGTGTTTTTAGAGAGGTGCTTCAA 15180
                  15121:ATTTTTTTAGCTGTTTCAAATACTTGATTTATCAAGTGTGTTTTTAGAGAGGTGCTTCAA 15180
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BTx623
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Dwarf white milo
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Tall white sooner milo 15181:TGAAAGTGTGAAAGCACCCGCTGCGCCCTTTGTTTAGGGTAGGTTGCTTATTCTTATTTG 15240
bmr-6
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BTx623
                  Dwarf white milo
bmr-6
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BTx623
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Dwarf white milo
                  15301:TATATATTTAGATATAGATTTTTTTAAAGAGCAACAAGAGGTTTGCCATGGTTTTATTGA 15360
Tall white sooner milo 15301:TATATATTTAGATATAGATTTTTTTAAAGAGCAACAAGAGGTTTGCCATGGTTTTATTGA 15360
bmr-6
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BTx623
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Dwarf white milo
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Tall white sooner milo 15361:CGATAAAAAGAGCAAAAACATGATTACAAATGCATGACTAGAGTAACACCGGTGGTCCAC 15420
bmr-6
                  15361:CGATAAAAAGAGCAAAAACATGATTACAAATGCATGACTAGAGTAACACCGGTGGTCCAC 15420
BTx623
                  Dwarf white milo
                  bmr-6
BTx623
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Dwarf white milo
Tall white sooner milo 15481:GGTCAGAAAAAAGGTCATAAAAAGTACCTCCAAAAAATCCAAGAGGAATGGCACAACAC 15540
bmr-6
                  15481:GGTCAGAAAAAAGGTCATAAAAAGGTACCTCCAAAAAATCCAAGAGGAATGGCACAACAC 15540
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BTx623
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Dwarf white milo
Tall white sooner milo 15541:AATGACTAAACGCAACTAAAAACTTAGGAAGACAACTTTAAAAGAATCTGTGGTAGTATT 15600
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bmr-6
BTx623
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Dwarf white milo
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Tall white sooner milo 15601:TGTTATAGTGCCAAGTTAAACTGTTGTATATCATGCTTGCACAAAGAGAGTAGCTAGTTA 15660
bmr-6
                  15601:TGTTATAGTGCCAAGTTAAACTGTTGTATATCATGCTTGCACAAAGAGAGTAGCTAGTTA 15660
                  15661:GATTCGATGTCACGAAAGAATATTTAAAATTTTTTGGAATTGGTGCAACTAAAAGGCCTT 15720
BTx623
Dwarf white milo
                  15661:GATTCGATGTCACGAAAGAATATTTAAAATTTTTTGGAATTGGTGCAACTAAAAGGCCTT 15720
Tall white sooner milo 15661:GATTCGATGTCACGAAAGAATATTTAAAATTTTTTGGAATTGGTGCAACTAAAAGGCCTT 15720
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bmr-6
BTx623
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Dwarf white milo
Tall white sooner milo 15721:ATTTCTGTTTCAATCATCGGCCCAGCTTTACTGAGATGCCAATCTCGGGCATCCTCCATT 15780
bmr-6
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BTx623
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Dwarf white milo
                  15781:TTACATGGGTTGGACCACTTGGACGGAGTAACGACCACGTGGTTCTCGCTATATTTGAAC 15840
Tall white sooner milo 15781:TTACATGGGTTGGACCACTTGGACGGAGTAACGACCACGTGGTTCTCGCTATATTTGAAC 15840
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bmr-6
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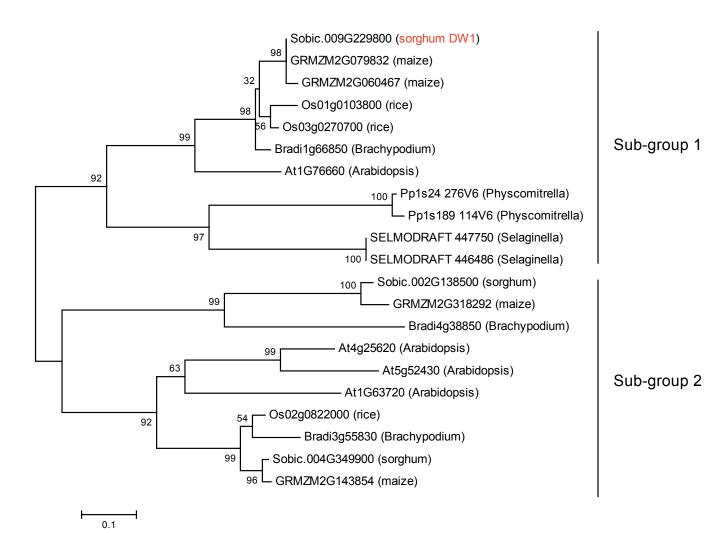
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BTx623
Dwarf white milo
                    15841:GCATGCCTTCCCGCGCGAATCGCGCACCGGCAGCGCAAGGCGCCAGCTATGCACAGCGA 15900
Tall white sooner milo 15841:GCATGCCTTCCCGCGCGAATCGCGCACCGGCAGCGCGAAGGCGCCAGCTATGCACAGCGA 15900
                    15841:GCATGCCTTCCCGCGCAATCGCGCACCGCAGCGCGAAGGCGCCAGCTATGCACAGCGA 15900
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BTx623
                    Dwarf white milo
                    15901:ATGGAGCTAGAAACCGCCGGCGGCGAGCGCGCGCGAGAAGACGATCCAAATTTAGGCGC 15960
Tall white sooner milo 15901:ATGGAGCTAGAAACCGCCGGCGAGCGAGCGCGAGCGAAGACGATCCAAATTTAGGCGC 15960
bmr-6
                    15901:ATGGAGCTAGAAACCGCCGGCGGCGAGCGAGCGACGAAGACGATCCAAATTTAGGCGC 15960
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BTx623
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                    15961:CAGAATGACTAGAGGAGCGGTCACGCAGGAGGAGGCCGGAGGGAAGGGGAACCGGCTC 16020
Dwarf white milo
Tall white sooner milo 15961:CAGAATGACTAGAGGAGGGTCACGCAGGAGGAGGCCGGAGGGAAGGGGGAGACCGGCTC 16020
bmr-6
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BTx623
                    16021:CTCGACCTCTCCGCCGCCGCCGCCGCCGCATGGGGTCCCCACCCCGCTCTGCGGTCATC 16080
Dwarf white milo
                    16021:CTCGACCTCTCCGCCGCCGCCGCCGCCGCATGGGGTCCCCACCCCGCTCTGCGGTCATC 16080
Tall white sooner milo 16021:CTCGACCTCTCCGCCGCCGCCGCCGCCGCATGGGGTCCCCACCCCGCTCTGCGGTCATC 16080
bmr-6
                    16021:CTCGACCTCTCCGCCGCCGCCGCCGCCGCAATGGGGTCCCCACCCCGCTCTGCGGTCATC 16080
BTx623
                    16081:GCCGTGGCCTTCCTCCTCGCCTCCTCGGTGAGGCGTTCTTCGACATCTTCAACTTC 16140
Dwarf white milo
                    16081:GCCGTGGCCTTCCTCCTCGCCTCCTCGGTGAGGCGTTCTTCGACATCTTCAACTTC 16140
Tall white sooner milo 16081:GCCGTGGCCTTCCTCCTCCTCGCCTCCGGTGAGGCGTTCTTCGACATCTTCAACTTC 16140
bmr-6
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BTx623
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Dwarf white milo
Tall white sooner milo 16141:TTCCACCCGCACTCGGAGACCGACTACTTCCAGAACGCCTTCGAGGGCACGCCGGAGCAG 16200
bmr-6
                    16141:TTCCACCCGCACTCGGAGACCGACTACTTCCAGAACGCCTTCGAGGGCACGCCGGAGCAG 16200
BTx623
                    Dwarf white milo
                    bmr-6
                    16261:CTCACCAGGGTGCCGGCCGGGGGACCGCCCAGCAAGGCTGCGCAGGACACGGTCGCGCTC 16320
BTx623
Dwarf white milo
                    16261:CTCACCAGGGTGCCGGCCGGGGGACCGCCCAGCAAGGCTGCGCAGGACACGGTCGCGCTC 16320
Tall white sooner milo 16261:CTCACCAGGGTGCCGGCGGGGGACCGCCCAGCAAGGCTGCGCAGGACACGGTCGCGCTC 16320
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bmr-6
BTx623
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Dwarf white milo
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Tall white sooner milo 16321:CCCGCCGACAAAGGCGGCGGGGCAGTCGGCTCGTGGACCATCGTCAGCGAAAACTCCGGC 16380
                    16321:CCCGCCGACAAAGGCGGCGGGGCAGTCGGCTCGTGGACCATCGTCAGCGAAAACTCCGGC 16380
bmr-6
                    16381:GTGTCGGCCATGCACATGGTCGTTATGCGCCATGGCAAGGCCGTCATGTTCGATACCAGC 16440
BTx623
Dwarf white milo
                    16381:GTGTCGGCCATGCACATGGTCGTTATGCGCCATGGCAAGGCCGTCATGTTCGATACCAGC 16440
Tall white sooner milo 16381:GTGTCGGCCATGCACATGGTCGTTATGCGCCATGGCAAGGCCGTCATGTTCGATACCAGC 16440
bmr-6
                    16381:GTGTCGGCCATGCACATGGTCGTTATGCGCCATGGCAAGGCCGTCATGTTCGATACCAGC 16440
BTx623
                    16441:ACCACCGGGCGGTCACTCATGCGGTTGCCCCAGGACAACTGCCGCATCGACCCGCGCGCC 16500
                    16441:ACCACCGGGCGGTCACTCATGCGGTTGCCCCAGGACAACTGCCGCATCGACCCGCGCGCC 16500
Dwarf white milo
Tall white sooner milo 16441:ACCACCGGGCGGTCACTCATGCGGTTGCCCCAGGACAACTGCCGCATCGACCCGCGCCC 16500
bmr-6
                    16441:ACCACCGGGCGGTCACTCATGCGGTTGCCCCAGGACAACTGCCGCATCGACCCGCGCGCC 16500
BTx623
                    16501:AAGGAGGAGGGCACCATGGACTGCTGGGCGCACTCCGTCGAGTTCGACTACAACACCGGC 16560
Dwarf white milo
                    16501:AAGGAGGAGGCACCATGGACTGCTGGGCGCACTCCGTCGAGTTCGACTACAACACCGGC 16560
Tall white sooner milo 16501:AAGGAGGAGGGCACCATGGACTGCTGGGCGCACTCCGTCGAGTTCGACTACAACACCGGC 16560
                    16501:AAGGAGGAGGCACCATGGACTGCTGGGCGCACTCCGTCGAGTTCGACTACAACACCGGC 16560
bmr-6
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BTx623
Dwarf white milo
                    ********************
BTx623
                    16621:TCCGGTCCCAGTCTCAGGCCGGTTTTGATGGCATGCAATGCAATGCAATGCGAGATCTT 16680
Dwarf white milo
                    16621:TCCGGTCCCAGTCTCAGGCCGGTTTTGATGGCATGCAATGCAATGCAATGCGAGATCTT 16680
Tall white sooner milo 16621:TCCGGTCCCAGTCTCAGGCCGGTTTTGATGGCATGCAATGCAATGCAATGCGCAGATCTT 16680
bmr-6
                    16621:TCCGGTCCCAGTCTCAGGCCGGTTTTGATGGCATGCAATGCAATGCAATGCGCAGATCTT 16680
                          *********************
BTx623
                    16681:AACAGACACATGGTGCTCGTCGGGCGCGTTGGACCCGGACGGCAACCTGGTGCAGACCGG 16740
                    16681:AACAGACACATGGTGCTCGTCGGGCGCGTTGGACCCGGACGGCAACCTGGTGCAGACCGG 16740
Dwarf white milo
Tall white sooner milo 16681:AACAGACACATGGTGCTCGTCGGGGGGGGCGCTTGGACCGGGCACCTGGTGCAGACCGG 16740
bmr-6
                    16681:AACAGACACATGGTGCTCGTCGGGCGCGTTGGACCCGGACGGCAACCTGGTGCAGACCGG 16740
BTx623
                    16741:CGGCTACTTCGAGGGCGAGAAGGTTGTGAGGACCCTGAGCCCGTGCGACACCTGCGACTG 16800
Dwarf white milo
                    16741:CGGCTACTTCGAGGGCGAGAAGGTTGTGAGGACCCTGAGCCCGTGCGACACCTGCGACTG 16800
Tall white sooner milo 16741:CGGCTACTTCGAGGGCGAGAAGGTTGTGAGGACCCTGAGCCCGTGCGACACCTGCGACTG 16800
bmr-6
                    16741:CGGCTACTTCGAGGGCGAGAAGGTTGTGAGGACCCTGAGCCCGTGCGACACCTGCGACTG 16800
BTx623
                    16801:GCTGGAGCAACCCAACAGCTTCGCCGAGGGGAGATGGTACGCGACGCAGGTAGCGCTCCC 16860
Dwarf white milo
                    16801:GCTGGAGCAACCCAACAGCTTCGCCGAGGGGAGATGGTACGCGACGCAGGTAGCGCTCCC 16860
Tall white sooner milo 16801:GCTGGAGCAACCCAACAGCTTCGCCGAGGGGAGATGGTACGCGACGCAGGTAGCGCTCCC 16860
bmr-6
                    16801:GCTGGAGCAACCCAACAGCTTCGCCGAGGGGAGATGGTACGCGACGCAGGTAGCGCTCCC 16860
                    16861:GGACGGCCGGTTCATCATGTTCGGCGGTCGCCGCGCCTTCAGCTACGAGTACGTCCCGTG 16920
BTx623
Dwarf white milo
                    16861:GGACGGCCGGTTCATCATGTTCGGCGGTCGCCGCGCCTTCAGCTACGAGTACGTCCCGTG 16920
Tall white sooner milo 16861:GGACGGCCGGTTCATCATGTTCGGCGGTCGCCGCGCCTTCAGCTACGAGTACGTCCCGTG 16920
                    16861:GGACGGCCGGTTCATCATGTTCGGCGGTCGCCGCGCCTTCAGCTACGAGTACGTCCCGTG 16920
                    16921:GCCCGGGAAGTCCAACGACAAGGCCGTCCGGTTGCCCTTCTTCCGCGAGACCACCGACGA 16980
BTx623
Dwarf white milo
                    16921:GCCCGGGAAGTCCAACGACAAGGCCGTCCGGTTGCCCTTCTTCCGCGAGACCACCGACGA 16980
Tall white sooner milo 16921:GCCCGGGAAGTCCAACGACAAGGCCGTCCGGTTGCCCTTCTTCCGCGAGACCACCGACGA 16980
bmr-6
                    16921:GCCCGGGAAGTCCAACGACAAGGCCGTCCGGTTGCCCTTCTTCCGCGAGACCACCGACGA 16980
                    16981:CGTGGAGAACAACCTGTACCCGTTCGTGAACCTCCTCCCCAGCGGCAACCTGTTCCTCTT 17040
BTx623
                    16981:CGTGGAGAACAACCTGTACCCGTTCGTGAACCTCCTCCCCAGCGGCAACCTGTTCCTCTT 17040
Dwarf white milo
Tall white sooner milo 16981:CGTGGAGAACCAGCTGTACCCGTTCGTGAACCTCCTCCCCAGCGGCAACCTGTTCCTCTT 17040
                    16981:CGTGGAGAACAACCTGTACCCGTTCGTGAACCTCCTCCCCAGCGGCAACCTGTTCCTCTT 17040
bmr-6
BTx623
                    17041:CGCCAACGACCGCTCCGTCATCTTCGACGCCAAGTCGAGCAAGATCGTGCGCGAGCTCCC 17100
Dwarf white milo
                    17041:CGCCAACGACCGCTCCGTCATCTTCGACGCCAAGTCGAGCAAGATCGTGCGCGAGCTCCC 17100
Tall white sooner milo 17041:CGCCAACGACCGCTCCGTCATCTTCGACGCCAAGTCGAGCAAGATCGTGCGCGAGCTCCC 17100
                    17041:CGCCAACGACCGCTCCGTCATCTTCGACGCCAAGTCGAGCAAGATCGTGCGCGAGCTCCC 17100
bmr-6
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BTx623
Dwarf white milo
                    17101:CAAGCTCGACGGCGGAGCCGCAACTACCCCGGGTCCGCCATGTCGACGCTGCTCCCGCT 17160
Tall white sooner milo 17101:CAAGCTCGACGGCGGGAGCCGCAACTACCCCGGGTCCGCCATGTCGACGCTGCTCCCGCT 17160
                    17101:CAAGCTCGACGGCGGAGCCGCAACTACCCCGGGTCCGCCATGTCGACGCTGCTCCCGCT 17160
bmr-6
BTx623
                    17161:CGACCTCCGCAACGTCACCGGCGACCCGGAGCCGGTGGTGGTCATCTGCGGCGGGGGCGCC 17220
                    17161:CGACCTCCGCAACGTCACCGGCGACCCGGAGCCGGTGGTGGTCATCTGCGGCGGGGCGCC 17220
Dwarf white milo
Tall white sooner milo 17161:CGACCTCCGCAACGTCACCGGGGCGCGCGCGGGGGGGGGCGCC 17220
bmr-6
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BTx623
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Dwarf white milo
                    17221:CAAGAAGGCCTTCAGGAAAGGCGAGAACAACACGTTCCTGCCGGCGCTCCGCGACTGCGC 17280
Tall white sooner milo 17221:CAAGAAGGCCTTCAGGAAAGGCGAGAACACACGTTCCTGCCGGCGCTCCGCGACTGCGC 17280
                    17221:CAAGAAGGCCTTCAGGAAAGGCGAGAACAACACGTTCCTGCCGGCGCTCCGCGACTGCGC 17280
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17281:CCGCATCAACCTGGCAAGGCCCGACGCGCAGTGGGAGAGCGAGGACATGCCCGTGGGCCG 17340
BTx623
Dwarf white milo
                      17281:CCGCATCAACCTGGCAAGGCCCGACGCGCAGTGGGAGAGCGAGGACATGCCCGTGGGCCG 17340
Tall white sooner milo 17281:CCGCATCAACCTGGCAAGGCCCGACGCGCAGTGGGAGAGCGAGGACATGCCCGTGGGCCG 17340
                      17281:CCGCATCAACCTGGCAAGGCCCGACGCGCAGTGGGAGAGCGAGGACATGCCCGTGGGCCG 17340
                            ********************
BTx623
                      17341:CGTCATGGGCGACATGCTGATCCTCCCACCGGCGACCTGCTGCTGCTCAGCGGCGCCGC 17400
Dwarf white milo
                      17341:CGTCATGGGCGACATGCTGATCCTCCCCACCGGCGACCTGCTGCTGCTCAGCGGCGCCGC 17400
Tall white sooner milo 17341:CGTCATGGGCGACATGCTGATCCTCCCCACCGGCGACCTGCTGCTCAGCGGCGGCGCCC 17400
bmr-6
                      17341:CGTCATGGGCGACATGCTGATCCTCCCCACCGGCGACCTGCTGCTCAGCGGCGCCGC 17400
                            **********************
BTx623
                      17401:CAAGGGCTGCGCCGGCTGGGGCTTCGGCAGGCAGCCGGTGCTGACCCCGATCCTGTACTC 17460
                      17401:CAAGGGCTGCGCCGGCTGGGGCTTCGGCAGGCAGCCGGTGCTGACCCCGATCCTGTACTC 17460
Dwarf white milo
Tall white sooner milo 17401:CAAGGGCTGCGCCGGCTGGGGCTTCGGCAGCCGGTGCTGACCCCGATCCTGTACTC 17460
bmr-6
                      17401:CAAGGGCTGCGCCGGCTGGGGCTTCGGCAGGCAGCCGGTGCTGACCCCGATCCTGTACTC 17460
BTx623
                      17461:GCCGCGCAAGGCGGAGGGCCCGCGGTTCCGGGCGCTCGCCGTCCACCATCGCGCGCAT 17520
Dwarf white milo
                      17461:GCCGCGCAAGGCGGAGGGCCCGCGTTCCGGGCGCTCGCCGTCCACCATCGCGCGCAT 17520
Tall white sooner milo 17461:GCCGCGCAAGGCGGAGGGCCCGCGGTTCCGGGCGCTGGCGTCGTCCACCATCGCGCGCAT 17520
bmr-6
                      17461:GCCGCGCAAGGCGGAGGGCCCGCGGTTCCGGGCGCTCGCCGTCCACCATCGCGCGCAT 17520
BTx623
                      17521:GTACCACTCCAGCAGCGCCGTGCTGCCCGACGCCACCGTGCTGGTGGCCGGCGGCAACGC 17580
Dwarf white milo
                      17521:GTACCACTCCAGCAGCGCCGTGCTGCCCGACGCCACCGTGCTGGTGGCCGGCGGCAACGC 17580
Tall white sooner milo 17521:GTACCACTCCAGCAGCGCCGTGCTGCCCGACGCCACCGTGCTGGTGGCCGGCGGCAACGC 17580
bmr-6
                      17521:GTACCACTCCAGCAGCGCCGTGCTGCCCGACGCCACCGTGCTGGTGGCCGGCGGCAACGC 17580
BTx623
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Dwarf white milo
                      17581:CAACGCGGCCTACAACTTCAGCGACGTGGACTTCCCCACCGAGGTGCGCGTGGAGCGGTT 17640
Tall white sooner milo 17581:CAACGCGGCCTACAACTTCAGCGACGTGGACTTCCCCACCGAGGTGCGCGTGGAGCGGTT 17640
                      17581:CAACGCGGCCTACAACTTCAGCGACGTGGACTTCCCCACCGAGGTGCGCGTGGAGCGGTT 17640
                      17641:CACCCCGCCGTACCTCAGCGATGATGGGGCCGCCGACAACCGCGCGGTGATCGACTTGGC 17700
BTx623
                      17641:CACCCCGCCGTACCTCAGCGATGATGGGGCCGCCGACAACCGCGGGTGATCGACTTGGC 17700
Dwarf white milo
Tall white sooner milo 17641:CACCCCGCCGTACCTCAGCGATGATGGGGCCGCCGACAACCGCGCGGTGATCGACTTGGC 17700
bmr-6
                      17641:CACCCCGCCGTACCTCAGCGATGATGGGGCCGCCGACAACCGCGGGTGATCGACTTGGC 17700
                      17701:GTCGTTGCCCGTGGACGGGATGCGGTACGGCGCCCCGTTCGCGTTCCGGTTCTCCGTGAC 17760
BTx623
Dwarf white milo
                      17701:GTCGTTGCCCGTGGACGGGATGCGGTACGGCGCCCCGTTCGCGTTCCCGTTCTCCGTGAC 17760
Tall white sooner milo 17701:GTCGTTGCCCGTGGACGGGATGCGGTACGGCGCCCCGTTCGCGTTCCCGTTCTCGTGAC 17760
                      17701:GTCGTTGCCCGTGGACGGGATGCGGTACGGCGCCCCGTTCGCGTTCCCGTTCTCCGTGAC 17760
bmr-6
BTx623
                      17761:CTCCGAGCCGGCCGTGGTGGAGGCCGACGTGAAGGTCACCTTGTACGCGCCGCCGCTTCAC 17820
Dwarf white milo
                      17761:CTCCGAGCCGGCCGTGGTGGAGGCCGACGTGAAGGTCACCTTGTACGCGCCGCCGTTCAC 17820
Tall white sooner milo 17761:CTCCGAGCCGGCCGTGGTGGAGGCCGACGTGAAGGTCACCTTGTACGCGCCGCCGCTTCAC 17820
                      17761:CTCCGAGCCGGCCGTGGTGGAGGCCGACGTGAAGGTCACCTTGTACGCGCCGCCGTTCAC 17820
bmr-6
                      17821:CACGCACGGCTGCTCCATGAACCAGCGGCTGCTGATCCTGCACTTCACCTCGTACGTCCA 17880
BTx623
Dwarf white milo
                      17821:CACGCACGGCTGCTCCATGAACCAGCGGCTGCTGATCCTGCACTTCACCTCGTACGTCCA 17880
Tall white sooner milo 17821:CACGCACGGCTGCTCCATGAACCAGCGGCTGCTGATCCTGCACTTCACCTCGTACGTCCA 17880
                      17821:CACGCACGGCTGCTCCATGAACCAGCGGCTGCTGATCCTGCACTTCACCTCGTACGTCCA 17880
bmr-6
BTx623
                      17881:GGAGGGACCGGACCTACAGGGTGTGCGTGGACGGCCCGGGCAAGCCGGAGCTAGCGCCGCG 17940
                      17881:GGAGGGACGGAGCTACAGGGTGTGCGTGGACGGGCCGGGCAAGCCGGAGCTAGCGCCGCG 17940
Dwarf white milo
Tall white sooner milo 17881:GGAGGGACGGAGCTACAGGGTGTGCGTGGACGGGCCGGGCAAGCCGGAGCTAGCGCCGCG 17940
bmr-6
                      17881:GGAGGGACGGAGCTACAGGGTGTGCGTGGACGGGCCGGGCCAGCCCGGAGCTAGCGCCGCG 17940
BTx623
                      17941:GGGGTACTACCTGCTGTCGTCGTCGCCAAGGGCGTCCGAGCGTCGGTGTGTGGGTGAA 18000
Dwarf white milo
                      17941:GGGGTACTACCTGCTGTTCGTCGTGGCCAAGGGCGTGCCGAGCGTCGGTGTGTGGGTGAA 18000
Tall white sooner milo 17941:GGGGTACTACCTGCTGTTCGTCGTGGCCAAGGGCGTGCCGAGCGTCGGTGTGTGGGTGAA 18000
                      17941:GGGGTACTACCTGCTGTTCGTCGTGGCCAAGGGCGTGCCGAGCGTCGGTGTGTGGGTGAA 18000
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BTx623	18001:GGTTTGGTGAGATCGATCGGCCGATCGTTGG	18031
Dwarf white milo	18001:GGTTTGGTGAGATCGATCGGCCGATCGTTGG	18031
Tall white sooner milo	18001:GGTTTGGTGAGATCGATCGGCCGATCGTTGG	18031
bmr-6	18001:GGTTTGGTGAGATCGATCGGCCGATCGTTGG	18031

Supplementary Figure S4 | Sequence comparison of the candidate region among cultivars. Sequences of the candidate region (~18kb) of the four cultivars, BTx623, Dwarf White Milo, Tall White Sooner Milo, and bmr-6 were compared. Asterisk and period indicate the same and different nucleotides, respectively. The nucleotide position at 2057 indicates dw1 mutation (shown as a red arrowhead). Three genomic sequences (Dwarf White Milo, Tall White Sooner Milo, and bmr-6) were determined by resequencing (Illumina Hiseq 2000).



Supplementary Figure S5 | Phylogenetic analysis of DW1. DW1 homologs of *Oryza sativa* (rice), *Arabidopsis thaliana* (Arabidopsis), *Zea mays* (maize), *Brachypodium distachyon* (Brachypodium), *Physcomitrella patens* (Physcomitrella), and *Selaginella moellendorffii* (Selaginella) were used for this analysis. Numbers at the branches are bootstrap values. The horizontal branch lengths are proportional to the estimated number of amino acid substitutions per residue. The DW1 homologs in seed plants are divided into two sub-groups, and the homologs in ferns and mosses are in subgroup I.

	Domain I
SELMODRAFT_447750 (Selaginella)	1MANTDNQGNVVP@RDP
SELMODRAFT_446486 (Selaginella)	1MANTDNQGNVVPCRDP
Pp1s24_276V6 (Physcomitrella)	1
Pp1s189_114V6 (Physcomitrella)	1
At1G76660 (Arabidopsis)	1MGS
Bradilg66850 (Brachypodium)	1MATPGSSTGGGGSSTRAANGAVAISAAATAAGSADARFTSCPPH
0s01g0103800 (rice)	1VAAAAATEARFISHPPQ
0s03g0270700 (rice)	1 PEQPRLQIRKGYSRGATGAVVARGSSSTRPANGAVAINAAAPAVGSAPAEVARFISOPPQ
GRMZM2G060467 (maize)	1MS <mark>SV</mark> GRSNGTRAANGAAAISTSTTEAGSADARF <mark>I</mark> SCLLH
Sobic.009G229800 (sorghum DW1)	1MSSVGSSPGTRAANGAAAISAAATAAGSADARFISCLLQ
GRMZM2G079832 (maize)	1MS <mark>SV</mark> GSCSGTRAANGAAAISAAATAAGSADARFIPCLLQ
Bradi4g38850 (Brachypodium)	1MDESVH <mark>TV</mark> NAAAVVLAAAARSSTGLHRHHNHLQQQLLRDDHAT
Sobic.002G138500 (sorghum)	1MQRQQDDDD <mark>TV</mark> HAA <mark>A</mark> IVLAAAARSTSTGLLRHQQQLDD <mark>I</mark> DHASC
GRMZM2G318292 (maize)	1
At1G63720 (Arabidopsis)	1DRLHQSS
At4g25620 (Arabidopsis)	1SRTOPSS
At5g52430 (Arabidopsis)	1SRVOPSS
Bradi3g55830 (Brachypodium)	1MQSGGEMRPVHNSVD <mark>TV</mark> NAMAAAIISAESFA <u>L</u> PTD
0s02g0822000 (rice)	1MQSGSEMRPVHNSVD <mark>TV</mark> NAA <mark>A</mark> VAIVTAESRT <mark>Q</mark> PQA
Sobic.004G349900 (sorghum)	1MQSGGEMRPVHNSVD <mark>TV</mark> NAAAVAIVTAESRT <mark>Q</mark> PPA
GRMZM2G143854 (maize)	1MQSGGDMRPVHNSVDTVNAAAVAIVTAESTTOPPA
	Intron I Domain II
SELMODRAFT 447750 (Selaginella)	17 SPELOROREKOWSKEWSLISSS-RKRSMRTCPAROESPINSTNAWTNGASSSTAANOE
SELMODRAFT_447750 (Selaginella)	17 SPELQRORGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF
SELMODRAFT_446486 (Selaginella)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDGTAQPSDPQ
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 4 EQDQRKRWGGCLGVFSCFKSQKGGKRIVPASRIPEGGNVSASQPNGAHQAGVLNNQAA
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 4 EQDQRKRWGGCLGVFSGFKSCKGGKRIVPASRIPEGGNVSASQPNGAHQAGVLNNQAA 45 Q-DRQSRWAGCFSGLSCFGSQ
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) Os01g0103800 (rice)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 4 EQDQRKRWGGCLGVFSGFKSQKGGKRIVPASRIPEGGNVSASQPNGAHQAGVLNNQAA 45 Q-DRQSRWAGCFSGLSGFGSQ
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDG
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDG
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDG
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize) Bradi4g38850 (Brachypodium)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 4 EQDQRKRWGGCLGVFSCFKSQKGGKRIVPASRIPEGGNVSASQPNGAHQAGVLNNQAA 45 Q-DRQSRWAGCFSGLSCFGSQ
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize) Bradi4g38850 (Brachypodium) Sobic.002G138500 (sorghum)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDG
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize) Bradi4g38850 (Brachypodium) Sobic.002G138500 (sorghum) GRMZM2G318292 (maize)	17 SPELQRQRGKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGGCCWSGPFGLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 4 EQDQRKRWGGCLGVFSGFKSQ
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize) Bradi4g38850 (Brachypodium) Sobic.002G138500 (sorghum) GRMZM2G318292 (maize) At1G63720 (Arabidopsis)	17 SPELGRORGKCWGKFWCLGSS-RKRGMRICPARGEGPA——SATNAWTNGASSSTAANGF 1 ——MARGGCCWSGPFGLGSLSRKNKKRIVPATRVHDG—TAQPSDPQ—— 1 ——MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDG—TAQPSDPQ—— 4 EQDQRKRWGGCLGVFSCFKSQ—KGGKRIVPASRIPEGGNVSASQPNGAHQAGVLNNQAA 45 Q-DRQSRWAGCFSGLSCFGSQ—KGGKRIVPAARNPDG—NASTNRGNALQSGGNSNQN 30 Q-DRRSGWAGCLSGLSCFGSQ—KGGKRIVPAARVPDG—NASTSRGNAHQSGSNSNQN 61 Q-DRQSRWAGCFSGLSCFGSQ—KGGKRIVPAARTSDG—NASTSRGNAHQSGSNSNQN 40 Q-DRQSRWAGCFSGLSCFGSQ—KGGKRIVPAARTSDG—NASTSRGNAHQSGSNSNQN 40 Q-DRQSRWAGCFSGLSCFGSQ—KGGKRIVPAARTSDG—NASNARGN-GQSGANSNQN 40 QQDRQSRWAGCFSGLSCFGSQ—KGGKRIVPAARTSDG—NASNARGNGGQSGANSNQN 40 QQDRQSRWAGCFSGLSCFGSQ—KGGKRIVPAARTSDG—NASNARGNGGQSGANSNQN 40 QQDRQSRWAGCFSGLSCFGSQ—KGGKRIVPAARTSDG—NASNARGNGGQSGANSNQN 40 QQDRQSRWAGCFSGLSCFGSQ—KGGKRIVPAARTSDG—NASNARGNGGQSGANSNQN 41 AATRKIRWWSRLKAKLCFRPPHVHP—RRIADDASSSSP———————————————————————————————
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize) Bradi4g38850 (Brachypodium) Sobic.002G138500 (sorghum) GRMZM2G318292 (maize) At1G63720 (Arabidopsis) At4g25620 (Arabidopsis) At5g52430 (Arabidopsis) Bradi3g55830 (Brachypodium)	17 SPELQRQRCKCWGKFWCLGSS-RKRGMRICPARQEGPASATNAWTNGASSSTAANQF 1MARGCCCWSCPFCLGSLSRKNKKRIVPATRVHDGTAQPSDPQ 1
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize) Bradi4g38850 (Brachypodium) Sobic.002G138500 (sorghum) GRMZM2G318292 (maize) At1G63720 (Arabidopsis) At4g25620 (Arabidopsis) At5g52430 (Arabidopsis) Bradi3g55830 (Brachypodium) 0s02g0822000 (rice)	17 SPELQRQRGKCWGKFWCLGSS—RKRGMRICPARQEGPA——SATNAWTNGASSSTAANQF 1 ——MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDG——TAQPSDPQ———— 1 ——MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDG——TAQPSDPQ————— 4 EQDQRKRWGGCLGVFSCFKSC—KGGKRIVPASRIPEGGNVSASQPNGAHQAGVLNNQAA 45 Q—DRQSRWAGCFSGLSCFGSC—KGGKRIVPAARNPDG——NASTNRGNALQSGGNSNQN 30 Q—DRRSGWAGCLSGLSCFGSC—KGGKRIVPAARVPDG——NASTSRGNAHQSGANSNQS 61 Q—DRQSRWAGCFSALSCFGSC—KGGKRIVPAARVPDG——NASTSRGNAHQSGANSNQN 40 Q—DRQSRWAGCFSGLSCFGSC—KGGKRIVPAARTSDG——NGSNTRGNGLQSGANSNQN 40 Q—DRQSRWAGCFSGLSCFGSC—KGGKRIVPAARTSDG——NGSNARGN—GQSGANSNQN 40 Q—DRQSRWAGCFSGLSCFGSC—KGGKRIVPAARTSDG——NGSNARGNGQSGANSNQN 40 Q—DRQSRWAGCFSGLSCFGSC—KGGKRIVPAARTSDG——NGSNARGNGQSGANSNQN 40 QQDRQSRWAGCFSGLSCFGSC—KGGKRIVPAARTSDG——NGSNARGNGLQSGANSNQN 41 AATRKIRWWSRLKAKLCFRPPHVHP—RRIADDASSSSP———————————————————————————————
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize) Bradi4g38850 (Brachypodium) Sobic.002G138500 (sorghum) GRMZM2G318292 (maize) At1G63720 (Arabidopsis) At4g25620 (Arabidopsis) At5g52430 (Arabidopsis) Bradi3g55830 (Brachypodium) 0s02g0822000 (rice) Sobic.004G349900 (sorghum)	17 SPELQRQRGKCVGKFWCLGSS-RKRGMRICPARQEGPA
SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize) Bradi4g38850 (Brachypodium) Sobic.002G138500 (sorghum) GRMZM2G318292 (maize) At1G63720 (Arabidopsis) At4g25620 (Arabidopsis) At5g52430 (Arabidopsis) Bradi3g55830 (Brachypodium) 0s02g0822000 (rice)	17 SPELQRQRGKCWGKFWCLGSS—RKRGMRICPARQEGPA——SATNAWTNGASSSTAANQF 1 ——MARGGCCWSGPFCLGSLSRKNKKRIVPATRVHDG——TAQPSDPQ———— 1 ——MARGGCCWSGPFFLGSLSRKNKKRIVPATRVHDG——TAQPSDPQ————— 4 EQDQRKRWGGCLGVFSCFKSC—KGGKRIVPASRIPEGGNVSASQPNGAHQAGVLNNQAA 45 Q—DRQSRWAGCFSGLSCFGSC—KGGKRIVPAARNPDG——NASTNRGNALQSGGNSNQN 30 Q—DRRSGWAGCLSGLSCFGSC—KGGKRIVPAARVPDG——NASTSRGNAHQSGANSNQS 61 Q—DRQSRWAGCFSALSCFGSC—KGGKRIVPAARVPDG——NASTSRGNAHQSGANSNQN 40 Q—DRQSRWAGCFSGLSCFGSC—KGGKRIVPAARTSDG——NGSNTRGNGLQSGANSNQN 40 Q—DRQSRWAGCFSGLSCFGSC—KGGKRIVPAARTSDG——NGSNARGN—GQSGANSNQN 40 Q—DRQSRWAGCFSGLSCFGSC—KGGKRIVPAARTSDG——NGSNARGNGQSGANSNQN 40 Q—DRQSRWAGCFSGLSCFGSC—KGGKRIVPAARTSDG——NGSNARGNGQSGANSNQN 40 QQDRQSRWAGCFSGLSCFGSC—KGGKRIVPAARTSDG——NGSNARGNGLQSGANSNQN 41 AATRKIRWWSRLKAKLCFRPPHVHP—RRIADDASSSSP———————————————————————————————

		Domain III
SELMODRAFT_447750 (Selaginella)	73	VGLSPSLLAPPSSPASFANSGNPSTVQSPASFTVSLCVPAASSCSPAFDSTATMFTIGPY
SELMODRAFT_446486 (Selaginella)	73	VGLSPS <mark>LLAPPSSPASFA</mark> NSGN <mark>PS</mark> TVQSPASF <mark>T</mark> VSLCVPAASSCSPAFDS <mark>T</mark> ATMFTIGPY
Pp1s24_276V6 (Physcomitrella)		-GQFAFLLAPPSSPASYANSMAPSSVQSPY-YPSSCPVPQGGGSRIPLETQSNMFAVGPY
Pp1s189_114V6 (Physcomitrella)	43	-GQFAF <mark>LLAPPSSPASYA</mark> NS <mark>MAPS</mark> SVQSPY-Y <mark>P</mark> SSCPVPQGGGSRIPLETQSN <mark>MFAVGPY</mark>
At1G76660 (Arabidopsis)	62	GGINLSLLAPPSSPASFTNSALPSTTQSPNCYLSLAANSPGGPSSSMYATGPY
Bradi1g66850 (Brachypodium)	99	GALNUSLLAPPSSPASFSNSALPSTAGSPNCFLSISANSPGGPTSNMFAVGPY
0s01g0103800 (rice)	84	AALNLS <mark>LLAPPSSPVSFS</mark> NSAI <mark>PS</mark> TA <mark>QSPNCFL</mark> SISANSPGGPTSN <mark>MFAVGPY</mark>
0s03g0270700 (rice)	115	VALNUSLLAPPSSPASFSNSAIPSTAGSPNCFLSISANSPGGPTSNMFAVGPY LPMNLSLLAPPSSPASFSNSALPSTAGSPNCFLSVSANSPGGPTSNMFAVGPY
GRMZM2G060467 (maize)	94	LPMNLSLLAPPSSPASFSNSALPSTAQSPNCFLSVSANSPGGPTSNMFAVGPY
Sobic.009G229800 (sorghum DW1)	93	MPMNLSLLAPPSSPASFSNSALPSTAQSPNCFLSVSANSPGGPTSNMFAVGPY
GRMZM2G079832 (maize)		MPMNLSLLAPPSSPASFSNSALPSTAQSPNCFLSVSANSPGGPTSNMFAVGPY
Bradi4g38850 (Brachypodium)	92	PQPVFAFVAPPSSPATSLLHSEAPSPPALLLGGHGINSPS-PRSIFAVGPY
Sobic.002G138500 (sorghum)		PQPAVAFVAPPSSPASSVLTSESPSPVVLLNANNACSSSYSSP-TASTFATGPY
GRMZM2G318292 (maize)	56	PQPT_AFVAPPPSPATSVLTSESPSPVVLLNANASSYSSPTASTFATGPY
At1G63720 (Arabidopsis)	86	VITTLPFIAPPSSPASFF0SEPPSATQSPVGILSFSPLPCNNRPSIFAIGPY
At4g25620 (Arabidopsis)	81	TSIFMPFIAPPSSPASFLPSGPPSASHTPDPGLLCSLTVNEPPSAFTIGPY
At5g52430 (Arabidopsis)	81	TTVVLPFIAPPSSPASFLOSDPSSVSHSPVGPLSLTSNTFSPKEPQSVFTVGPY
Bradi3g55830 (Brachypodium)		PPPVFPFVAPPSSPASFLOSGSASIVOSP-MGAPSFSPRSPNSPSPSGTPSIFATGPY
0s02g0822000 (rice)	86	PPPVFPFVAPPSSPASFLOSGGASIVOSP-VGAPSFSPLSPNSPSPTGPPSIFAIGPY
Sobic.004G349900 (sorghum)	88	PPPVFPFVAPPSSPASFLQSEPTSIVQSPRVGAPPFSPLSPNSQSPAG—TPSIFAIGPY
GRMZM2G143854 (maize)	88	PPPVFPFVAPPSSPASFLOSEPTSIVQSPRAGAPAFSPLSPNSQSPTGPPSIFAIGPY
		Domain IV
SELMODRAFT_447750 (Selaginella)		AHETTLVTPP-AFSAFTTAPSTAPFTPPPELAHLTTPSSPDVPFAQLLTS-LKN
SELMODRAFT_446486 (Selaginella)	133	AHETTLVTPP-AFSAFTTAPSTAPFTPPPELAHLTTPSSPDVPFAQLLTS-LKN
Pp1s24_276V6 (Physcomitrella)		AHETALVSPP-VFSTFTTAPSTAPFTPPPELAAHFTTPSSPDVPFAKLLGSSFSE
Pp1s189_114V6 (Physcomitrella)	101	AHETALVSPP-VFSTFTTAPSTAPFTPPPELAAHFTTPSSPDVPFAKLLASSFSD
At1G76660 (Arabidopsis)	115	AHETQLVSPP-VFSTFTTEPSTAPFTPPPELARLTAPSSPDVPYARFLTSSMDL
Bradi1g66850 (Brachypodium)		ANEPOLVSPPTAFSTYTTEPSTAPLTPPPELAHATTPSSPDVPYARFLSSSMGL
0s01g0103800 (rice)	137	ANEPOLVSPP-VFSTYTTEPSTAPLTPPPELAHATTPSSPDVPYARFLLSSMDL
0s03g0270700 (rice)	168	ANEPQLVSPP-VFSTYTTEPSTAPLTPPPELTHATTPSSPDVPYARFLFSANDL
GRMZM2G060467 (maize)	147	ANEPOLVSPP-VFSTYT-TEPSTAPLTPPPELAHATTPSSPDVPYARFLSSSMGI

Sobic.009G229800 (sorghum DW1)

142

157

106

138

143

146

146

132 AHE 135

143 AH

Bradi4g38850 (Brachypodium)

Sobic. 002G138500 (sorghum)

GRMZM2G079832 (maize)

GRMZM2G318292 (maize)

At1G63720 (Arabidopsis)

At4g25620 (Arabidopsis)

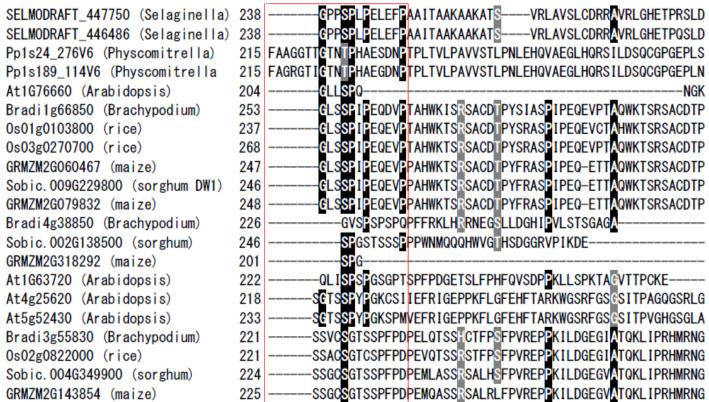
At5g52430 (Arabidopsis) Bradi3g55830 (Brachypodium)

Sobic. 004G349900 (sorghum)

Os02g0822000 (rice)

GRMZM2G143854 (maize)

	stop Ψ	Domain V
SELMODRAFT_447750 (Selaginella)		DOVH VDESDLTSLISDASGVSES
SELMODRAFT_446486 (Selaginella)	185 KGAVAGGAAPPYSASPFASPDYVSR————GD_0	
	155 QRTTKREAEPPYSASPFASPDYYQQDHHPQDD	
Pp1s24_276V6 (Physcomitrella)		
Pp1s189_114V6 (Physcomitrella)	155 QRSTKREPEPPYSASPFASPDYYQQDHSQQDDLQ	
At1G76660 (Arabidopsis)	168 KDLQ	
Bradi1g66850 (Brachypodium)	206 KTAGKEHNMHYLSTAYSGGSGLO	
0s01g0103800 (rice)	190 KTAGKDHNMPYLSTAYSGGSGLO	
0s03g0270700 (rice)	221 KTAGKDHNMPYLSTAYSGGSGLO	
GRMZM2G060467 (maize)	200 KTASKDHNMPFLSTTYSGGSGLO	T <mark>SY</mark> PLYPESPCSSLISPASVTPRT
Sobic.009G229800 (sorghum DW1)	199 KTASKEHNMPFLSTAYSGGSGLO	A <mark>sy</mark> p <mark>lypesp</mark> css <mark>lisp</mark> asvtprt
GRMZM2G079832 (maize)	201 KTASKEHNMPFLSTTYSGGSG C	ASYPLYPESPCSSLISPASVTPRT
Bradi4g38850 (Brachypodium)	202 AEQQSCGGLLQ	AAYQLQPGSPIPP
Sobic. 002G138500 (sorghum)	216 DQQPHCSPGGMVTEGFL	HAYQLQPGSPVLV
GRMZM2G318292 (maize)		HAYQLQPGSPVLK
At1G63720 (Arabidopsis)	190 SNHQTGSYGYKFPMSSSYEF	
At4g25620 (Arabidopsis)	180 ARRNSGGGMNQKFSAAHYEF	
At5g52430 (Arabidopsis)		RSNQVCPGSPGGGN_ISPGSVISN
Bradi3g55830 (Brachypodium)		HPYHIYPESPIGRLISP
0s02g0822000 (rice)		QSYQTYPESPTGRLISP
Sobic. 004G349900 (sorghum)		OSYPNYPDSPIGRLISP
GRMZM2G143854 (maize)	199 KNGEAGGDL	O <mark>SY</mark> PN <mark>YPDSP</mark> IGRLISP
OF HODDLET 447750 (0 1 1 1 1 1	ADDOL BELEER LITTURE	VDI AVOI ODDD O VDI OUETDOOLD
SELMODRAFT_447750 (Selaginella)	238CPPSELEELEFEAAITAAKAAKATS	VKLAVSLCDKK <u>A</u> VKLGHETPRSLD

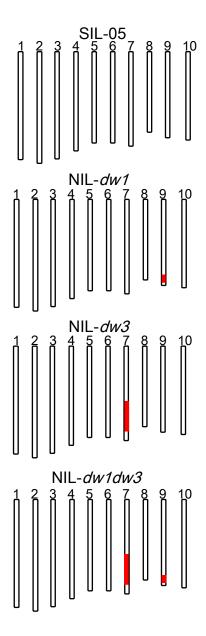


SELMODRAFT_447750 (Selaginella) SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella) At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize) Bradi4g38850 (Brachypodium) Sobic.002G138500 (sorghum)	287 275 275 213 306 290 321 299 298 300 264	SNNHSRELEPIKILSPPRGQYEERWCSRTLDSCSTSSNAVAATKSMEELPRRSHSCG—— SNNHSRELEPIKILSPPRGQYEERWCSRTLDSCSTSSNAVAATKSMEELPRRSHSCG—— DSGRERHGSFDSHSRFMVAMIHERDGSDSNSNSYGHERYSGSLTGLNDVLEGRNRYT—— DSGRERHGSFDSHSRFMGAMIHERDPSDSASHSYGHEQHSGSLSGLHEVLEGRNRHR—— CSRSDSGNTFGYDTNGVSTPLQESNFFCPETFAKFYLDHDPSVPQNG—GRLSVSKDSDV YSRTSPSNIFGLDSAAPRNCLLDSNFFRPAASAQFYLDQAQQTFPYN—GGRLSVSRD—— YSRNSPSNIFGLDSAASRNYMLDNNFFRPAASAQFYLDQAQQSFPYNNGGRISVSKD—— YSRNSPSNIFGLDSAASRNYMLDNNFFRPAASAQFYLDQAQQSFPYNNGGRISVSRD—— YARTSPTNIFGLDSSTPRNYMLDNNFFRPAASAQFYLDQAQQTFSHN—GGRVSVSRE—— YARNSPTNIFGLDSSTPRNYMLDSNFFRPAASAQFYLDQAQQTFPHN—GGRVSVSRE—— YARTSPTNIFGLDSNTPRNYMLDSNFFRPAASAQFYLDQAQQAFPHN—GGRVSVSRE—— YARTSPTNIFGLDSNTPRNYMLDSNFFRPAASAQFYLDQAQQAFPHN—GGRVSVSRE——
GRMZM2G318292 (maize)		
At1G63720 (Arabidopsis)		
At4g25620 (Arabidopsis)	272	SGALTPDGSKLTSGVVTPNGAETVIRMSYGNLTPLEGSLLDSQISEVASLANSDHGSSR-
At5g52430 (Arabidopsis)	287	SGALTPNGPEIVSGNLTPNNTTWPLQNQISEVASLANSDHG
Bradi3g55830 (Brachypodium)	275	GSLLDGHITAAVPVVDFSAR Q
0s02g0822000 (rice)	275	GSLLDGHI SAAVPVVDFSARLQ
Sobic.004G349900 (sorghum)	278	GSLLDGHITAAVPVVDFSARLQ
GRMZM2G143854 (maize)	279	GSLLDGQISAAVPVVDFSARLQ
		Domain VI
SELMODRAFT_447750 (Selaginella)	344	GIDEVELKESLSQVGALPRGGDDDDRADADVDTMVVEDSQ
SELMODRAFT_446486 (Selaginella)		GIDEVELKRSLSQVGALPRGGDDDDRADADVDTMVVEDSQ
Pp1s24_276V6 (Physcomitrella)		KLKQDKGPRSSLRSHEKE-DDIQEEDLLELPMLLGSESS
Pp1s189_114V6 (Physcomitrella)	332	KLNQDKSSTFIGLKIQ QEKDDVRNEDLL LPMLLGSES
At1G76660 (Arabidopsis)		YPTNGYGNGNQNRQNRSPKQDMEELEAYRASEGFSADEIITTSQYVEITDVMDGSFNTSA
Bradilg66850 (Brachypodium)		KQDADEVEAYRASEGFSADEIVTTQHYAEIPDTLDDGFSISP
0s01g0103800 (rice)		KQDVEEVEAYRASEGFSADEIVTTQTYVEIPDALDEGFSISP
0s03g0270700 (rice)	270	KQDAEEVEAYRASEGFSADEIVTTQAYVEIPDALDEGFSISP
-	3/0	KQGADEIEAYRASFGFSADEIVQSQSYVGIPDAVDESFSISP
GRMZM2G060467 (maize)	300	COLOR DE LEAVINAS DE LA COLOR
Sobic. 009G229800 (sorghum DW1)	354	KQDADE I EAYRASEGESADE I VQSQSYVG I PDAVDESES I SP
GRMZM2G079832 (maize)		KQDA <mark>D</mark> EIEAY <mark>R</mark> A SF GFSADEI <mark>V</mark> QSQSYVGIPDAVDESF <u>S</u> ISP
Bradi4g38850 (Brachypodium)	264	
Sobic.002G138500 (sorghum)	280	
GRMZM2G318292 (maize)		
At1G63720 (Arabidopsis)	270	QKIVRPHKPVSFDLDADHVIRCVDQKLRTTFP
At4g25620 (Arabidopsis)	331	HNDE <mark>ALVVPHRVSF</mark> ELTGEDV <mark>ARCLASKLNRSGS</mark>
At5g52430 (Arabidopsis)		SE <mark>VMVADHR</mark> V <mark>SF</mark> ELTGEDV <mark>ARCLASKLNRSHDRMNNN</mark> DRI
Bradi3g55830 (Brachypodium)		SNDHAMDHRVSFELTVEDVARCLEKKTAISGDSAQSSFHL
0s02g0822000 (rice)		NNDHAMDHRVSFELTVEDVARCLEKKTNINGESAAASFRL
Sobic.004G349900 (sorghum)	300	PNEHAMDHRVSFELTVEDVARCLEKKTAISGDSSTASFHL
GRMZM2G143854 (maize)	301	PNEHAMDHRVSFELTVEDVARCLEKKTAISGDSGTASFHL
-		

At1663720 (Arabidopsis) 362 At4g25620 (Arabidopsis) 365 -HEKASG	SELMODRAFT_447750 (Selaginella) SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella) At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize) Bradi4g38850 (Brachypodium) Sobic.002G138500 (sorghum) GRMZM2G318292 (maize)	384 371 372 331 404 389 420 397 396 398 264	QPTSALLRG———————————————————————————————————
At4g25620 (Arabidopsis) 365	• • • • • • • • • • • • • • • • • • • •	302	
At5g52430 (Arabidopsis) 368 ETEESSS 375 LPTSNGDHSR SPACING SPA	•		
Bradi3g55830 (Brachypodium)			
OSO2g0822000 (rice) 337			
Sobic. 004G349900 (sorghum) GRMZM2G143854 (maize) 340 APTSNG—DHHR——————————————————————————————————			
GRMZM2G143854 (maize) 341 APTGSG—DHHR——————————————————————————————————			
SELMODRAFT_447750 (Selaginella) 413 DLAA—TATAETT THSRPI EDG GVCSSSSSSSCLD KSGDVEGEPKRYEEQALESPRSD SELMODRAFT_446486 (Selaginella) 413 DLG——ATAETT THSRPI EDG GVCSSSSSSSSCLD KSGDVEGEAKRFEEQALESPRSD Pp1s24_276V6 (Physcomitrella) 413 DLG——ATAETT THSRPI EDG GVCSSSSSSSSCLD KSGDVEGEAKRFEEQALESPRSD Pp1s189_114V6 (Physcomitrella) 420 SLLEGSDGKRPGT IGWAPVD TSLPRESEGP1QSSSTTRNETEENEKDTVYKSIKNGKGSD At1676660 (Arabidopsis) 352 PKSEAD DSQVVDFQSPKSSNSYKDHKQRNR1HAD = AL SRVGSVKGSRSYH1SSSDA Bradi1g66850 (Brachypodium) 451 PQKVLH D1FKGTKGGHLSDDG AKDCHPFRKSRD = IS KP1EVRKKSPP QA-CSDA GRMZM2G060467 (maize) 454 PHNVVH D1FKGTKGGDVC=DEG VKDCHPFRKAND = IS KP1EVRKKVQF QSSSSDA GRMZM2G060467 (maize) 454 PNKVLR DVFKGTKGGHQS=DEG VKDCHPFRKAND = IS KP1EVRKKVQF QSSSSDA GRMZM2G079832 (maize) 454 PNKVLR DVFKGTKGGHQS=DEG VKDGHPFRRTD = IS KP1EVRKKSPP GHS-CSDA GRMZM2G079832 (maize) 455 PNKVLR DVFKGTKGGHQS=DEG VKDGHPFRRTD = IS KP1EVRKKSPP GHS-CSDA GRMZM2G318292 (maize) 456 PNKVLR DVFKGTKGGHQS=DEG VKDGHPFRRTD = IS KP1EVRKKSPP GHS-CSDA GRMZM2G318292 (maize) 457 PNKVLR DVFKGTKGGHQS=DEG VKDGHPFRRTD = IS KP1EVRKKSPP GHS-CSDA GRMZM2G318292 (maize) 457 PNKVLR DVFKGTKGGHQS=DEG VKDGHPFRRTD = IS KP1EVRKKSPP GHS-CSDA GRMZM2G318292 (maize) 457 PNKVLR DVFKGTKGGHQS=DEG VKDGHPFRRTD = IS KP1EVRKKSPP GHS-CSDA GRMZM2G318292 (maize) 457 PNKVLR DVFKGTKGGHQS=DEG VKDGHPFRRTD = IS KP1EVRKKSPP GHS-CSDA GRMZM2G318292 (maize) 457 PNKVLR DVFKGTKGGHQS=DEG VKDGHPFRRTD = IS KP1EVRKKSPP GHS-CSDA GRMZM2G318292 (maize) 457 PNKVLR DVFKGTKGGHQS=DEG VKDGHPFRRTD = IS KP1EVRKKSPP GHS-CSDA GRMZM2G318292 (maize) 457 PNKVLR DVFKGTKGGHQS=DEG VKDGHPFRRTD = IS KP1EVRKKSPP GHS-CSDA GMZ			
SELMODRAFT_447750 (Selaginella) 413 DLAA—TATAETITHSRPIEEDGVGVCSSSSSSSCL_KSGDVEGEPKRYEEQALESPRSD SELMODRAFT_446486 (Selaginella) 413 DLG——ATAETITHSRPIEEDGVGVCSSSSSSSCL_KSGDVEGEAKRFEEQALESPRSD Pp1s24_276V6 (Physcomitrella) 413 SLLEGTDGKPRGTIGWAPVDTSLPRESEGPIGSSSTTRNETEENEKDTVYKSIKNGKGSD Pp1s189_114V6 (Physcomitrella) 420 SLLEGSDGKRPGTIGWAPVDTSLPRESEGPIGSSSTTRNETEENEKDTVYKSIKNGKGSD At1G76660 (Arabidopsis) 352 PKSEAD DSQVVDFQSPKSSNSYKDHKQRNRIHAD = AL SRVGSVKGSRSYHISSSDA SSQVVDFQSPKSSNSYKDHKQRNRIHAD = AL SRVGSVKGSRSYHISSSDA SSQVVDFQSPKSSNSYKDHKQRRIHAD = AL SRVGSVKGSRSYHISSSDA SSQVVDFQSPKSSNSYKDHKGRGHLSDDGG VKDCHPFRKRD = IS KPIEVRKKSPP CQA-CSDA SQVVDC-DEG VKDCHPFRKRD = IS KPIEVRKKVPC CQSSSSDA 444 PNKVLR DVFKGTKGGHLSDDGG VKDCHPFRKAD = IS KPIEVRKKSLP CHS-CSDA SQVDC (SORGHUM) 443 PNKVLR DVFKQTKGGHLSDDGG VKDCHPFRRTD = IS KPIEVRKKSLP CHS-CSDA SQVDC (SORGHUM) 444 PNKVLR DVFKQTKGGHLSDDG VKDGHPFRRTTD = IS KPIEVRKKSLP CHS-CSDA SQVDC (SORGHUM) 445 PNKVLR DVFKQTKGGHLSDDG VKDGHPFRRTD = IS KPIEVRKKSLP CHS-CSDA SQVDC (SORGHUM) 445 PNKVLR DVFKQTKGGHLSDDG VKDGHPFRRTD = IS KPIEVRKKSLP CHS-CSDA SQVDC (SORGHUM) 445 PNKVLR DVFKQTKGGHLSDDG VKDGHPFRRTD = IS KPIEVRKKSLP CHS-CSDA SQVDC (SORGHUM) 445 PNKVLR DVFKQTKGGHLSDDG VKDGHPFRRTD = IS KPIEVRKKSLP CHS-CSDA SQVDC (SORGHUM) 445 PNKVLR DVFKQTKGGHLSDDG VKDGHPFRRTD = IS KPIEVRKKSLP CHS-CSDA SQVDC (SORGHUM) 445 PNKVLR DVFKQTKGGHLSDDG VKDGHPFRTTD = IS KPIEVRKKSLP CHS-CSDA SQVDC (SORGHUM) 445 PNKVLR DVFKQTKGGHLSDDG VKDGHPFRTTD = IS KPIEVRKKSLP CHS-CSDA SQVDC (SORGHUM) 445 PNKVLR DVFKQTKGGHLSDD			
SELMODRAFT_446486 (Selaginella) 413 DLGATAETTTHSRPI_EDG_GVCSSSSSSSCL_KS_GDVEGEAKRFEEQALESPRSD_Pp1s24_276V6 (Physcomitrella) 431 SLLEGTDGKRPGTIGWAPV_TSLPRESEGPIQSSSTTRNETEENEKDTVYKSIKNGKGSD_Pp1s189_114V6 (Physcomitrella) 420 SLLEGSDGKRPGTIGWAPV_TSLPRESEGPIQSSSTTRNETEENEKDTVYKSIKNGKGSD_Bradi1g66850 (Brachypodium) 451 POKVLH_DIFKGTKGGBLS_DDG_AKDCHPFRKSRD_LS_KVJEVRKKSPPGQA-CSDAF_0s01g0103800 (rice) 424 PONVVH_DIFKGTKGGBLS_DDG_AKDCHPFRKSRD_LS_KVJEVRKKSPPGQA-CSDAF_0s03g0270700 (rice) 454 PHNVVH_DIFKGTKGGBLS_DEG_VKDCHPFRKAND_LS_KVJEVRKKVQPGQSSSSDAF_GRMZM2G060467 (maize) 441 PNKVLR_DVFKGTKGGBLS_DEG_VKDCHPFRKAND_LS_KVJEVRKKVQPGQSSSSDAF_GRMZM2G079832 (maize) 445 PNKVLR_DVFKGTKGGBLS_DEG_VKDGHPFRRTD_LS_KVJEVRKKSLPGHS-CSDAF_BRAdi4g38850 (Brachypodium) 443 PNKVLR_DVFKGTKGGBLS_DEG_VKDGHPFRRTD_LS_KVJEVRKKSLPGHS-CSDAF_GRMZM2G318292 (maize) 445 PNKVLR_DVFKGTKGGBLS_DEG_VKDGHPFRRTD_LS_KVJEVRKKSPPGHS-CSDAF_GRMZM2G318292 (maize) 445 PNKVLR_DVFKGTKGGBLS_DEG_VKDGHPFRRTD_LS_KVJEVRKKSPPGHS-CSDAF_GRMZM2GAGASDVD_LS_CS_SDAF_GRMZM2GAGASDVD_LS_CS_SDAF_GRMZM2GAGASDVD_LS_CS_SDAF_GRMZM2GAGASDVD_LS_CS_SDAF_GRMZM2GAGASDVD_LS_CS_SDAF_GRS_CS_SDAF_GRMZM2GAGASDVD_LS_CS_SDAF_GRMZM2GAGASDVD_LS_CS_SDAF_GRM			
	SELMODRAFT_446486 (Selaginella) Pp1s24_276V6 (Physcomitrella) Pp1s189_114V6 (Physcomitrella) At1G76660 (Arabidopsis) Bradi1g66850 (Brachypodium) 0s01g0103800 (rice) 0s03g0270700 (rice) GRMZM2G060467 (maize) Sobic.009G229800 (sorghum DW1) GRMZM2G079832 (maize) Bradi4g38850 (Brachypodium) Sobic.002G138500 (sorghum) GRMZM2G318292 (maize) At1G63720 (Arabidopsis) At4g25620 (Arabidopsis) At5g52430 (Arabidopsis) Bradi3g55830 (Brachypodium)	413 431 420 352 451 424 454 441 443 445 264 280 302 376 380 351	DLGATAETTTHSRPIEEDGVGVCSSSSSSSCLDKSGDVEGEAKRFEEQALESPRSD SLLEGTDGKRPGTIGWAPVDTSLPRESEGPIGSSSTTRNETEENEKDTVYKSIKNGKGSD SLLEGSDGKRPGTIGWAPVDTSLPREPEASTGSSSDLSNGTEENETDRVYKGDQNGKSSS PKSEADLDSQVVDFQSPKSSNSYKDHKQRNRIHADEEALLSRVGSVKGSRSYHISSSDAE PQKVLHLDIFKGTKGGHLSDDDGIAKDCHPFRKSRDEISLKPIEVRKKSPPGQA-CSDAE PQNVYHLDIFKGTKGGDVCEDEGWVKDCHPFRKGRDEISLKPIEVRKKVQFGQS-CSDAE PHNVVHLDIFKGTKGGDLSEDEGVVKDCHPFRKAMDEISLKPIEVRKKVQPGQSSSSDAE PNKVLRLDVFKGTKGGHQSEDEGIVKDGHLFRKTADEISLKPIEVRKKSLPGHS-CSDAE PNKVLRLDVFKGTKGGHQSEDEGIVKDGHPFRRTTDEISLKPIEVRKKSLPGHS-CSDAE PNKVLRLDVFKGTKGGHQSEDEGIVKDGHPFRRTTDEISLKPIEVRKKSLPGHS-CSDAE PNKVLRLDVFKGTKGGHLSEDEGIARDGHPFRRTTDEISLKPIEVRKKSLPGHS-CSDAEGSDQEEEGRGGSGGDDDDEVPKSGEFVFGNADDGAAEDVD
	GRMZM2G143854 (maize)	333	ARAGLYVDESYHDLPEKARRSLSLRLAKEFNFNNVDVGSVEPSVGSDWWANEKVAGMT

SELMODRAFT_447750 (Selaginella)	471	CGIVLEVEITPDDLVKTSWSSQAK
SELMODRAFT_446486 (Selaginella)		CGIVLEVEITPDDLVKVNITGAKNKKKNGIVTKKNGFHHHHHHHHHHHHHHHRNGFV
Pp1s24_276V6 (Physcomitrella)		NVPQQVVGAGAKEVSEGTITPVGHHGSAPDCCSRCESLVSQCEQLSVALKEARRKQQEKD
Pp1s189_114V6 (Physcomitrella)	480	EGFQEA ISAGA I EEPEETVVSAENHDCSSRYESLVSQYEQLSVALKEAERKQLEKD
At1G76660 (Arabidopsis)		VEYRRGRSLRESRENRHRKA
Bradilg66850 (Brachypodium)	510	IEYRRARSLREANSVLSWRSTLARQLQ
0s01g0103800 (rice)	483	IEYRRARSLREANGVVSWRSTLARQLQ
0s03g0270700 (rice)	514	IEYRRARSLREANGVLSWRSTLARQLQ
GRMZM2G060467 (maize)		IEYRRTRSLRDANGVLSRRSALARQLH
Sobic.009G229800 (sorghum DW1)		IEYRRTRSLRDANGVLSRRSALARQLH
GRMZM2G079832 (maize)		IEYRRTRSLRDANGVLSRRSALARQLH
Bradi4g38850 (Brachypodium)	304	GNRWPAFPPRG
Sobic. 002G138500 (sorghum)	319	EQWPFLLAHTHS
GRMZM2G318292 (maize)		
At1G63720 (Arabidopsis)	348	FFPVMQSGTLS
At4g25620 (Arabidopsis)	432	HSPRNSWTFFPVLRSGHT
At5g52430 (Arabidopsis)	429	FFPGLRSGVS
Bradi3g55830 (Brachypodium)	411	TEPRKSWSFRPMAQPGVS
0s02g0822000 (rice)	411	SEPRKSWSFFPVAQPGVS
Sobic. 004G349900 (sorghum)	412	SEPKKNWSFHPVAQPGVS
GRMZM2G143854 (maize)	413	TEPKKNWSFHPVVQPGVS
SELMODRAFT_447750 (Selaginella)	F04	ACCURACION DAMANDANEL NI TRUTTIVADI MARDINDA
SELMODRAFT_446486 (Selaginella)		ASSKSSWEDLDAMSVDCMELNLTDNTIKSPLKSSPIMDSC
Pp1s24_276V6 (Physcomitrella)		RLAEEREKQIRHLTQLLQSGGLQKFVGDFPKAANQVGEGNNVKDIS
Pp1s189_114V6 (Physcomitrella)	536	RLAEEREQQKRHLTHLLQSGGLQKLVGDYLRAGNEVGKNKKTKDAP
At1G76660 (Arabidopsis)		
Bradi1g66850 (Brachypodium)		
0s01g0103800 (rice)		
0s03g0270700 (rice)		
GRMZM2G060467 (maize)		
Sobic 009G229800 (sorghum DW1)		
GRMZM2G079832 (maize)		
Bradi4g38850 (Brachypodium)		
Sobic 002G138500 (sorghum)		
GRMZM2G318292 (maize)		
At1G63720 (Arabidopsis)		
At4g25620 (Arabidopsis)		
At5g52430 (Arabidopsis)		
Bradi3g55830 (Brachypodium)		
0s02g0822000 (rice)		
Sobic. 004G349900 (sorghum)		
GRMZM2G143854 (maize)		

Supplementary Figure S6 | Amino acid alignment of sorghum DW1 and its homologs. The proteins are same as in Supplementary Fig. S3. The positions of Intron 1 and 2 are indicated by arrowheads. The mutation in bmr-6 is indicated by an arrow. The six conserved domains are indicated by red rectangles.



Supplementary Figure S7 | **Graphical representations of each NIL.** White and red bars indicate chromosomes of SIL-05 and bmr-6, respectively. NIL-*dw1* and NIL-*dw3* contain a ~170 kb and ~2.8 Mb fragments of bmr-6, respectively.

Supplemental Table S1 Primers used in this study

Supplemental Table S1	Primers used in this study	
ssr5-34 R	sequence GTTTGCAGACACCGGGAGTAGATGATGT	purpose QTL
Xcup01_F	ACATGGGCGGGTTGAAGAC	QTL
Xcup01_R Xtxp79 F	GTTTGCAGGAAGGGAGGATGTAG ACTCCACAGCCAGAACATT	QTL QTL
Xtxp79_R	GTTTGAAGCAGTGCAGGATTCAGT	QTL
SB260_F SB260_R	TCAAGTCCACTCTACTCCTGCCCT AAGAAAAGGCTAATCGATTGGGGA	QTL QTL
SB441_F	ACAGAGACTCCGCTGGAAATGAAC	QTL
SB441_R SB474 F	TGTTTGTTTGGATCGGAGTGAGAA TAGGTTGCAATTGATGTTCCAACG	QTL QTL
SB474_R	CACCTACAACTGCGGATACAACCA	QTL
SSR2_491_F SSR2_491_R	AGACGAAGAAGAGCTTAGCGTGGAG GTTTGTAGATGAACCTGGTGTGCTTCCC	QTL QTL
Xtxp88_F	ACGTGAATCAGCGAGTGTTGG	QTL
Xtxp88_R Xtxp11_F	GTTTGCGTAATGTTCCTGCTC ATCGAGAAATTCAACATGCTG	QTL QTL
Xtxp11_R	GTTTGCTAGACCGACGAGATAAG	QTL
Xtxp37_F	ACAACCTAAGAGGCCTATTTAACC	QTL
Xtxp37_R Xtxp335_F	GTTTACGGCGACTATGTAACTCATAG ATATTTCCTCTTGAAAGAATCAGGG	QTL QTL
Xtxp335_R	GTTTATTCATCGAGCAAAAGGCA	QTL
SSR2_630_F SSR2_630_R	ATAATGGACAAAGCAGAAACGACGA GTTTATGAGCAGCGGATAAGTTCGAGAG	QTL QTL
Xtxp279_F	ATTCTGACTTAACCCACCCCTAAA	QTL
Xtxp279_R SSR2 733 F	GTTTAGCTCATCAATGTCCCAAACC ATATTGTGTTGGGGGAAACATAGGG	QTL QTL
SSR2_733_R	GTTTGGCTCAGGAGGCTCTATTGTGTTT	QTL
SSR3_868_F SSR3_868_R	ACTCATCAGGCTAAAATGATCACCG GTTTATCGAGCACCTGAAACATGAAACA	QTL QTL
SSR3_891_F	AGTCCTCTCTCTCTCTCCGCT	QTL
SSR3_891_R SSR5_968_F	GTTTGAACACAAGGAATGCGGTGACATA ACCTGGAAATCACGAGACGAATCTT	QTL QTL
SSR5_968_R	GTTTAATTAACGCAACACCCTTGAGGAC	QTL
SSR3_987_F SSR3_987_R	ATACTCCATGTGGCAGATCTCAAGC GTTTAATGGAGTGGAG	QTL QTL
SSR5_1004_F	ATGATCCATCATCTTTCCATCCGT	QTL
SSR5_1004_R Xtxp297 F	GTTTCAAGGGACATATTGTGAGCAGGTG AGACCCATATGTGGTTTAGTCGCAAAG	QTL QTL
Xtxp297_R	GTTTGCACAATCTTCGCCTAAATCAACAAT	QTL
Xtxp211_F Xtxp211_R	ATCAACGGCCAATGATTTCTAAC GTTTAGGTTGCGAATAAAAGGTAATGTG	QTL QTL
SB1088_F	GGAAGGGGAAAATGGTGAAGAAC	QTL
SB1088_R	CACCAACATCACGGCCTATTA	QTL QTL
SSR2_1142_F SSR2_1142_R	ATCTACTTGTCCCTCTGCCTCTGCT GTTTGGTTCGCAGCTTTGAATGATACAC	QTL
Xtxp72_F	ATTATGGAAGCAAATGAC	QTL
Xtxp72_R SSR2 1196 F	GTTTCGAATCCTAATTGAGGTAAGC ACATTGCTAGGTACATGGGCCAAAT	QTL QTL
SSR2_1196_R	GTTTCCCGTTGGTTCACCGTGTATAAAT	QTL
SSR3_1264_F SSR3 1264 R	ACTCAGTTCACGACGATTTGACTGC GTTTACCACGCATCTTTTCGTAGGTCAT	QTL QTL
Xtxp1_F	ATTGGCTTTTGTGGAGCTG	QTL
Xtxp1_R Xtxp56 F	GTTTACCCAGCAGCACTACACTAC ATGTCTTCGTAGTTGCGTGTTG	QTL QTL
Xtxp56_R	GTTTCCGAAGGAGTGCTTTGGAC	QTL
SB1308_F SB1308_R	TTGTATTGCGTGAGACAAAGGGTC CTTCATCAAGTTAGTGTGGCGACG	QTL QTL
SB1311_F	GCCGGAGTAGTGGACTCTGTCTGT	QTL
SB1311_R SB1343 F	AAACCAAAAGCAAAGCAAAGGTCG CTAAGGCGTGCCTGTACTGAAACC	QTL QTL
SB1343_R	TGTGACATGTAACGGACTGCTCAA	QTL
SB1362_F SB1362_R	AGCGCATTTGGATGCTGATATGTA TAGAACACACAGCCCTCTTTGCTG	QTL QTL
SB1378_F	AGCTCGGAATTCATTCAAATCAGG	QTL
SB1378_R SB1392_F	ATCTTGCGCGAATCGAAGTCAT TGCTTGCTGCCAATAAAAAGAGTG	QTL QTL
SB1392_R	ATAGCCTCTGTGCGTGTCTTTGTG	QTL
SB1426_F SB1426_R	TGCAATGTGTGTTTTCAGGAGA TACAATGGACACTCGTCACACAGC	QTL QTL
Xtxp7_F	ACATCTACCACCCCCCCCCCCCCCCCCCCCCCCCCCCCC	QTL
Xtxp7_R SB1491 F	GTTTACACATCGAGACCAGTTG GAACTGATCGGTTAACATGTACGGC	QTL QTL
SB1491_R	GGAATGGCTTTGGAGAGAGAGGTT	QTL
SSR4_1518_F SSR4_1518_R	AGATAGGAGGTGCCAGCCAGTATG GTTTCTCTCATCCGCTCTCATTCTCC	QTL QTL
SSR2_1526_F	ATGTGTTCCTGTCATTACTTGGCGT	QTL
SSR2_1526_R SSR3_1562_F	GTTTAGCAAAACGGGTCTCCTACGTACC AGAGACGACGCTAATCCATCCAAAC	QTL QTL
SSR3_1562_R	GTTTGCAAGAACACCAGTGCATACATCC	QTL
SSR5_1722_F	AGGCCGGCCGCATTATTTTCTC	QTL
SSR5_1722_R SSR2_1779_F	GTTTAAGAATATTATCTCGTGCGGTGCG ACAAGCACCAAACCATCACAAGAAG	QTL QTL
SSR2_1779_R	GTTTCCTCTGCTCTCGTCTCTTT	QTL
Xtxp9_F Xtxp9_R	ACAATAGCACCGCCGCGCG GTTTCATTGTGGAGTCCCTGATAC	QTL QTL
SSR2_1814_F	ATTTAATCCAATCCACGGAGAATGC	QTL
SSR2_1814_R SSR2_1839_F	GTTTCGGAAATGATTGCCAGTTTCAGTA ATGAAGAAGCTGTCCGTTTGACAAG	QTL QTL
SSR2_1839_R	GTTTAAAAAGCTGCTCCTTTGAGGCTTT	QTL
SB1862_F SB1862_R	GTGCATAGGGCCAAAAGAGCACTA TGACCAGCATATGGGTCACATCTT	QTL QTL
SB1936_F	CCTCTCTCTCTCCCAACACG	QTL
SB1936_R Xtxp31 F	CATGAATTCTTCGCATCATTCCAC ATGCGAGGCTGCCCTACTAG	QTL QTL
Xtxp31_R	GTTTGGACGTACCTATTGGTGC	QTL
SSR2_1992_F SSR2_1992_R	ACGCATCAGGAATTCACTTTAGGCT GTTTGTGCAAAGTACGATGGATCAGGT	QTL QTL
SSR2_2078_F	ACTTAATCAATCACACCTCGCTCCC	QTL
SSR2_2078_R SSR3_2122_F	GTTTCTTTTCCACACCAAACCATGAGA AGAAGAGCCCAAGGAAGGAAGATA	QTL QTL
SSR3_2122_R	GTTTAAAAGTGACAGACAACCCGTAGCC	QTL
SSR4_2129_F SSR4_2129_R	ACGGGAAAATTCTTGATCATGGTG GTTTTGGAGAGGCCTCATATTTGGA	QTL QTL
S5R4_2129_R Xtxp285_F	ATTTGATTCTTGCTTTGCCTTGT	QTL

Xtxp285_R	GTTTGTCATTTCCCCCTTCTTTCTTTT	QTL
Xtxp70_F	AGTGACCTTAGCACCAAGCTC	QTL
Xtxp70_R	GTTTCAGGTAGCACTAGAG	QTL
SSR3_2362_F	ATGCAATCTATAGCAGCTGGAGACG	QTL
SSR3_2362_R	GTTTGTATGCATTTGCAAGCAGTGTGT	QTL
SSR2_2435_F	ATAGCTAGCTGCGTAATGACGAGGA	QTL
SSR2_2435_R	GTTTCGAGCATCGTCGGAAAATATACA	QTL
Xtxp26_F	ACAAGTGTAGTAGCAGTTTAGTCTC	QTL
Xtxp26_R	GTTTAGGTATCAAAGGACCAAGG	QTL
SSR5_2513_F	AGATGAGCCATATTTGGCAAGGAA	QTL
SSR5_2513_R	GTTTCAGTAAAGCTGGCTAGCTGCAACA	QTL
SSR2_2565_F	ACTGCACGCCTAATTATCCCTTGTC	QTL
SSR2_2565_R	GTTTGCTGCTGTCCAGCTACTATCA	QTL
SSR3_2599_F	ATCTGGAGTCTGGAAGAATGCTGG	QTL
SSR3_2599_R	GTTTCCACTAGTGCATCAGCACA	QTL
Xtxp343_F	ACGATTGGACATAAGTGTTC	QTL
Xtxp343_R	GTTTATAAACATCAGCAGAGGTG	QTL
SSR5_2635_F	AGTGTCCGGCCTTTCTTGTGTTAG	QTL
SSR5_2635_R	GTTTGAGCAGTGCTGTTTGGAATA	QTL
SSR5_2660_F	ACAGCCCCTTTCATATGTTCAAAA	QTL
SSR5_2660_R	GTTTATGGAGCAAGGAAAGGAAAGGAAAGGAAAGGAAAG	QTL
SSR5_2772_F	AGATGCAACCAACCAACCAACCAACCAACCAACCAACCAA	QTL
SSR5_2772_R	GTTTAAAGCCAAGAAGGACCCAAAG	QTL
SSR2_2831_F	ATTCAGCTTTGGATCTCGATCATCATCA	QTL
SSR2_2831_R	GTTTCGTCAAATTCTAGCTCCTATCA	QTL
SSR3_2963_F	AGAGGGAGAGTGTGGATGCTGGTAT GTTTGAAATCTGAGCCTAGGAGGGTGGT	QTL
SSR3_2963_R	AGGAAAATGAGAAAAGAAACGGGC	QTL
SSR2_3016_F		QTL
SSR2_3016_R	GTTTGTCTCTGATTGTCAATGCCTCCCT	QTL
SSR2_3045_F SSR2_3045_R	ATTGGCCATTTGACCTGCTAAAAG GTTTAACATACCAAAGCCGCCGTATC	QTL QTL
	ATGGTAGTTTCTTCCCCAACCC	QTL
SSR4_3052_F SSR4_3052_R	GTTTAATTAAGAAACAAAACCCGGAGGG	QTL
SSR4_3056_F	AGACGCCATCTACTCCATCCTCCTA	QTL
SSR4_3056_R	GTTTATCTACGTCTCGTACCCTC	QTL
SB3067 F	ATGAGCAGCAGCATCATCAA	QTL
SB3067 R	TGTTTCAGTTATGTGTGGGA	QTL
SB3007_K SB3077 F	TGTTTCCTTTGTGTACGGTGTTGC	QTL
SB3077_I SB3077_R	GCCATCTGATGCTACGCTGTAGTG	QTL
SB3134 F	GGATGCAGGAAGAAGCTAAAGCAA	QTL
SB3134 R	CTGCAATGCACAGTTTCAGAGTGA	QTL
SB3146 F	CCCTCCTGTTCCTTATTTAGGTTTTCA	QTL
SB3146 R	ACCACCACAAAATGAATGTTTC	QTL
SB3160 F	GGAATCTGGAACTTGATTGGCTCA	QTL
SB3160 R	GTACAAGTTGGAACACAAGGCACG	QTL
SSR3 3178 F	ATTCTCTGCTCCGTTTCCTAACAGG	QTL
SSR3 3178 R	GTTTCTCGATTCATCTCTTGG	QTL
SSR2_3183_F	ACCTTTGCACTTGATCACTTTCCCT	QTL
SSR2 3183 R	GTTTCTTCCTCGCCAACTTCTCATC	QTL
SSR3_3251_F	AGGACACCACACCGGATCTATAAGG	QTL
SSR3 3251 R	GTTTCCACCCACTACATGAAGGAAT	QTL
SSR5_3411_F	AGCTCGCATACTAGCTCATCGTTCA	QTL
SSR5 3411 R	GTTTGACTGTCCATGCGATCAGTAGGAA	QTL
YUC7 F2-R1 F	CTAGCTCATCGTTCACCACC	QTL
YUC7 F2-R1 R	GGGAGAAGACTGTCCATG	QTL
SSR2 3417 F	ACACTCTCTCCCACCTTCTCATCAA	QTL
SSR2 3417 R	GTTTGCTGGATTACCACAAGGCTATGA	QTL
SSR5 3423 F	AGTCCTATAAGACCTCGCCTTCGC	QTL
SSR5_3423_R	GTTTACGTTCTAGGAGTTGTCCCGGAG	QTL
Xtxp6 F	ATCGGATCCGTCAGATC	QTL
Xtxp6 R	GTTTCTAGGGAGGTTGCCAC	QTL
SSR3_3479_F	ACTGGCGTGGCAAGTTCAGTCT	QTL
SSR3 3479 R	GTTTGTTGCTGTTTTTGGAGAGTTGA	QTL
SB24905 F	GGCACCGTATGTCTGCATGCTTAT	QTL
SB24905_R	TGGATCCAATTACTTCCTCTGTCA	QTL
SSR2_3489_F	ACAATAAATGCCGGTTTTCTGGTGAG	QTL
SSR2 3489 R	GTTTGCATGCCACTTTCTCTCATGT	QTL
SB3484 F	GCGACAGCGATCGGTGATATAATAA	QTL
SB3484_R	TATGCTTTTCATGGGAATGTGTGG	QTL
SB24977_F	ACAGACAGACATGCACGAAGAAGG	QTL
SB24977_R	CATGGAATCCGCGAGATACTTTTT	QTL
SB24991_F	GTCGCCACATCCAAATCATCATAG	QTL
SB24991_R	GTTGGCCTGGTATGGCAAACTTTA	QTL
SSR4_3503_F	AGTCCCTTGTTCGACTCCGTATCC	QTL
SSR4_3503_R	GTTTAACTACACCACCGTCGACAT	QTL
SB25027_F	TGCGATGCTAAAAATGAGTTGTGC	QTL
SB25027_R	TAGACTAGAGGTCTGGGCGGAGAG	QTL
SB25034_F	GCCTCACAACACAAAATCAGG	QTL
SB25034_R	CCCATGTTGGGTTTCAACTCTAGC	QTL
SB3507_F	ACTCTTCTCTCCCAGTCCCACG	QTL
SB3507_R	GCGCCTCTACAGGCTACAGGTATT	QTL
SB25093_F	GAGAGGGTGCAGGGAATAGGAAGT	QTL
SB25093_R	TAGATCCATACCCCTTCAGGAGCC	QTL
SB3517_F	CGAATCAGTTTTGTGCATCTTCGT	QTL
SB3517_R	AGTGCCGGAATCCTAGAAAGAAGAA	QTL QTL
SB25162_F SB25162_R	CGCGTAAGTCACCAAACAACACT AACCTGTCTTCAGCACCCAGATTC	QTL
SSR5 3535 F	ATGAATTGCGTGGAAGATGAAGGT	QTL
SSR5_3335_F SSR5_3535_R	GTTTGCCATTACGTACTACGCCTATCG	QTL
SB3547 F	AGACATCTCCCTCTCCATGATGCT	QTL
SB3547_I SB3547_R	GCCGCATCAGCAAAATACCATAAA	QTL
SB3552 F	TCCACCTGGCTCTCACTTTCTAGG	QTL
SB3552 R	ATCATGCATGTCGTTTCTGATCGT	QTL
SB3564 F	TGAAAACAGGAGGAAGGAATCG	QTL
SB3564 R	CCAGAGAAACCATCTATGTGCGTG	QTL
SSR2 3577 F	AGAAAAGAAGGTTCCTCCTGCCATT	QTL
SSR2 3577 R	GTTTACATCCACCCTTCTCTTGGTCAAA	QTL
Xtxp145 F	AGTTCCTCCTGCCATTACT	QTL
Xtxp145 R	GTTTCTTCCGCACATCCAC	QTL
Xtxp274_F	AGAAATTACAATGCTACCCCTAAAAGT	QTL
Xtxp274_R	GTTTACTCTACTCCTTCCGTCCACAT	QTL
SSR5_3737_F	ACTGACAGAAACATGCATGGGGTTA	QTL
SSR5_3737_R	GTTTAAACGACGCACTTGGTCAGAAA	QTL
SSR4_3805_F	ACAAGTTGGAGTTTCATCAGCATCG	QTL
SSR4_3805_R	GTTTACCAAAGGTATGCAGGGACCAC	QTL
SSR2_3870_F	ATAATAATGCTGCATGCTGAGTGCC	QTL
SSR2_3870_R	GTTTCCATTGTGTTTCTGATAGCTTGACAG	QTL

Xtxp159 F	ACCCAAAGCCCAAATCAG	QTL
Xtxp159_R	GTTTGGGGAGAAACGGTGAG	QTL
SSR5_3966_F	ATCAGTTCATCTCCTTTTGGGTGC	QTL
SSR5_3966_R SSR5_4016_F	GTTTACTTCACAGGGTCACAGCACAGTC AGACAAGAGAAATCCCGTAAACCCC	QTL QTL
SSR5_4016_R	GTTTGTACCTCAACCAGACGCTCGTCAC	QTL
SSR2_4043_F	AGCAAATTTTGGGGTGTTACATCGT	QTL
SSR2_4043_R SSR5_4072_E	GTTTGTTGTGGTTGTTGTTGTTG ACTACCTGCGGTGGAAAGAGTCGAT	QTL QTL
SSR5_4072_F SSR5_4072_R	GTTTGAGTACGAACGTCTCGGCTTGTC	QTL
SSR3_4143_F	ATCTCCTTTAATTACGACCGACCGA	QTL
SSR3_4143_R	GTTTCTCCATGGATCGACCCTTTTGTT	QTL
SSR3_4197_F SSR3_4197_R	ACGATCGAGTTTTTCTTGTGGTGTTC GTTTCATGCATCCATGTTCGTCTTCTCT	QTL QTL
SSR4_4230_F	ATTCATCAACCCTTTGTCAACCCTT	QTL
SSR4_4230_R	GTTTCGTTAGAAATCACCGCTAACTGGG	QTL
Xtxp273_F Xtxp273_R	AGTACCCATTTAAATTGTTTGCAGTAG GTTTCAGAGGAGGAGGAAGAGAGG	QTL QTL
SSR4 4339 F	ACAAAAGGGGAAAGAAACCAAGCTC	QTL
SSR4_4339_R	GTTTCACCACAAAGGGAAAAGGAAAATA	QTL
SSR4_4358_F	AGCCTCCTCAGTCACAAAACTCACA GTTTCGTCCTTCCCGTCTAGAATTAGC	QTL QTL
SSR4_4358_R SSR4_4433_F	AGCTTGCTGGAGGTGAAGTACCC	QTL
SSR4_4433_R	GTTTAGGCCACCAAGTAAGCAGTGTACC	QTL
SSR3_4470_F	ATGCAGACATCTGAATTACGGTGGT	QTL
SSR3_4470_R SSR2_4480_F	GTTTCAGGGAAGACTGAACTACGGGAG ACCATAGCTGCGAGCAACCTGAG	QTL QTL
SSR2 4480 R	GTTTGTCAGCCTTTAGATGAGGCCAGAA	QTL
SSR5_4493_F	AGATGCAGACGACATGGCTAGAGAA	QTL
SSR5_4493_R	GTTTAAATTCCGGTACCTCAATCGCC	QTL
Xtxp354_F Xtxp354_R	ATGGGCAGGGTATCTAACTGA GTTTGCCTTTTTCTGAGCCTTGA	QTL QTL
SSR2 4533 F	ACAAGGAGAGAGAGAGGGGCAAAAG	QTL
SSR2_4533_R	GTTTCACGATCGTCTCTGGCTGTCTA	QTL
SSR3_4586_F SSR3_4586_R	ATCCTACGTAGCTACTCCAGCAGGC GTTTCTGCAGGGTACGTAACTCCTACGC	QTL QTL
SSR5_4642_F	ACAGAGAGGTGGAGGCAGTTAG	QTL
SSR5_4642_R	GTTTATCATGTCCACCACCCATCTTTTT	QTL
SSR4_4687_F	ATCATTTCATCACCCCACGAAC	QTL
SSR4_4687_R SSR3_4688_F	GTTTATGCAGCAAGTACACAACTGGGAC ACTGTAAGCATGATGAAGGTCGTGG	QTL QTL
SSR3 4688 R	GTTTAAGAAGGTGATGACAGGGATGGAG	QTL
SSR3_4706_F	ATTGCTTGCTCCTGGGACT	QTL
SSR3_4706_R	GTTTGTTGCCTTTGCCTAGCTTTCCTTT	QTL
SSR3_4711_F SSR3_4711_R	AGGACCTGCACTTCGATGGTGT GTTTGGGACGACGCTAACTGTCTCCTTA	QTL QTL
SSR3 4715 F	ACAATTCGAGAAGAGCTGGTGAGTGG	QTL
SSR3_4715_R	GTTTAGTGCGCGTGAGTAGTGCAT	QTL
SSR3_4764_F	ATAATTAGTTAGGCCCACACGCACA	QTL
SSR3_4764_R Xtxp258 F	GTTTGAGGCTGACCGTCTTCATCTCTGT ACACCAAGTGTCGCGAACTGAA	QTL QTL
Xtxp258_R	GTTTGCTTAGTGTGAGCGCTGACCAG	QTL
SSR2_4795_F	AGACGACTGCACTTGTTGCTTGACT	QTL
SSR2_4795_R Xtxp67_F	GTTTCTTGACACCACCAAGAAACCACAG ACCTGACGCTCGTGGCTACC	QTL QTL
Xtxp67 R	GTTTCCACACAGATTCAGGCTCC	QTL
SSR5_4851_F	ACAATCTTAAGGGGTCTACCAGGGCA	QTL
SSR5_4851_R	GTTTATGGAGAGGGCATGTAATGTTGGT	QTL
SSR5_4888_F SSR5_4888_R	ACGTCAAAGCAAGTTTCACTTAGAAC GTTTCTCCACGGTGAATCTAATAACACATCA	QTL QTL
SSR3 4902 F	ATACAAAGGGAATGCCTCTCCCC	QTL
SSR3_4902_R	GTTTACACACATCGAGGAAAATGTGGG	QTL
SSR5-5007_F SSR5-5007 R	AGGAACTTGTTGCTGGTGTAGCAGA GTTTGCTGCCTCTTCGTACTGTGAGTGA	QTL QTL
SSR5-5031 F	ACTGCACCTTGCTAGAACCCACTT	QTL
SSR5-5031_R	GTTTGGTATATATGGGGAAGCGTGCGTA	QTL
SB5019_F	AAAGAGAAGGGAGAGAAAGC	QTL
SB5019_R SB5028 F	GTGGAGCTTGTCCGAGATCTTGTC TTGCATCCCTAAAAGCATTTCTGC	QTL QTL
SB5028_R	GCCATTGATGGCTACGTAAATTCC	QTL
SSR2_5042_F	ACAGTAACCACCAGAACGCTT	QTL
SSR2_5042_R SSR4_5057_F	GTTTCGCTTCTCTCCCTTGTGTCTT ACCGGCACATTTACTCACTTCCTCT	QTL QTL
SSR4 5057 R	GTTTACGATTCCACCGAACCAAGAGTT	QTL
SSR4_5059_F	ACAGTACTGTACGACGTAGGAGACGC	QTL
SSR4_5059_R SSR5_5061_E	GTTTACTCCGGACGCTAATACAAG ACAACCTCTCCATATCCGAGGTACG	QTL OTI
SSR5_5061_F SSR5_5061_R	ACAACCTCTCCATATCCGAGGTACG GTTTCGGGGAACTCAATTATTCGTTTTG	QTL QTL
Xtxp107_F	ACAAAGTGAGCGTGGTC	QTL
Xtxp107_R	GTTTGGACAGGGATAACATA	QTL
SSR3_5111_F SSR3_5111_R	ACAAACCAACCCGACCCACTCTTTAT GTTTCGGTTCGTTCCATCAGATTCTTCT	QTL QTL
SSR5_5159_F	ATATGCTTCCAATACAGAGGGACCG	QTL
SSR5_5159_R	GTTTGTACGCCAGGAGATGTGATATGG	QTL
SSR5_5216_F	ACATGTCCTTGTTGATGTCGATGCT	QTL
SSR5_5216_R SSR3_5242_F	GTTTCCACCATCGGTTCCTAGCTG AGCTACAAACATCTGAGACTGCCGA	QTL QTL
SSR3_5242_R	GTTTCAGAGGACCCTGTTTCGTTTGAT	QTL
SSR3_5298_F	ACCTGCTAACGCTGCCGTACAC	QTL
SSR3_5298_R SSR2 5303 F	GTTTGTCACCTCCTTCATCCTTGTCGTT AGAGAGAGGGGAAAGAAAAAGGGC	QTL QTL
SSR2_5303_F SSR2_5303_R	GTTTGTTCCACATCGATTCGTCTCCTCT	QTL
SSR5_5423_F	ATCCGCTATAAATTGGAGAGGACCC	QTL
SSR5_5423_R	GTTTAGCCGCAGTAAGCTCACTAGGAAA AGAGAACGGAGACTGAAGGTTGGAA	QTL
SSR5_5460_F SSR5_5460_R	AGAGAACGGAGACTGAAGGTTGGAA GTTTGCTGCCCCTTAAACTATTCGCTCT	QTL QTL
Xtxp141_F	ATGTATGGCCTAGCTTATCT	QTL
Xtxp141_R	GTTTCAACAAGCCAACCTAAA	QTL
SSR2_5529_F SSR2_5529_R	ACAGCAAATTTCAGGTGGTTTTTGAC GTTTATTATATCTCTGCGTGCAACGGCT	QTL QTL
SSR2_5529_R SSR2_5543_F	ACAACCCCTTGAACTCGAAGAAGAC	QTL
SSR2_5543_R	GTTTAGTGCCAATCCTCTCACTCCAC	QTL
SSR3_5556_F	AGCTTCAAAGATGGCCAAAACAGA GTTTGCAGAGCCAAAGTCAAGGTGTTA	QTL
SSR3_5556_R SSR2_5560_F	GTTTGCAGAGCCACAAGTCAAGGTGTTA ACCACCAGATCGATTATTCAGAGGC	QTL QTL
SSR2_5560_R	GTTTCCAGCCTCTAACTCCCTACCACCT	QTL
SSR4_5576_F	ACACGTGTTCTTCGTCGTTCCTATG	QTL



SSR4 5576 R	GTTTCTCATCACGGATTCACGATACAGC	QTL
Xcup07_F	ACTAGAGGATTGCTGGAAGCG	QTL
Xcup07_R	GTTTCTGCTCGCTTGAG	QTL
SSR2_5603_F SSR2_5603_R	ACAATTCTGCTGCACACTTCAGATGC GTTTCTGCGACCGTCTCACAACAATTAG	QTL QTL
SSR chr.9 57167 25 F	GTTCGTTCGGAGAGGTGCTGG	fine mapping
SSR_chr.9_57167_25_R	GCCCGGCATCCAAATTCCTAATCCG	fine mapping
SSR_chr.9_57184_F	GGCCTAGATTGTTCATGATA	fine mapping
SSR_chr.9_57184_R SSR_chr.9_57191_F	TAAACACGGCCTAAGTCGAT CTAGGTTAAAGCCGTCCGCC	fine mapping fine mapping
SSR_chr.9_57191_R	AACCCTAACGAGTGGAGGAC	fine mapping
SNP 57209seq F	GGCACGTACGTACAATCAAG	fine mapping
SNP_57209seq_R SNP_57211seq_F	ATAATGCGCGTATGCACCTG TCCTGCAGCACGTACTTCTG	fine mapping fine mapping
SNP 57211seq T	GATCTAGAGGTCTTCCATTG	fine mapping
SNP_57211_Xbal_F	TTCGCTGTTGGGCCATATGC	fine mapping
SNP_57211_Xbal_R	AAGGCATGTTATGCTCCTTGCTGGCAGTCT	fine mapping
SNP_57225_Mbol_F SNP_57225_Mbol_R	AGGCGCCAGAATGACTAGAG GGAGGAGGAAGGCCACGGCGATGACCGGAT	fine mapping fine mapping
SSR_chr.9_57227_F	GTACTACCTGCTGTCG	fine mapping
SSR_chr.9_57227_R	CTTCTGTACAATACGGGTTG	fine mapping
57241seq F	CGGAGCGTCTGAGATTGAGAG	SNP sequencing
57241seq R TA57249seq F	CCGCAGCATTGAATTGGGAC GATGATCGGTGGAGATAGTC	SNP sequnencing SNP sequnencing
TA57249seq R	ATGGATGCACATCTGTCAG	SNP sequnencing
TA57249seqb_F	GAGATAGTCTTACGGCTAGG	SNP sequnencing
TA57249seqb_R TT57259seq F	CTCTCTTATGAATCTGTCAG CTTCCCAGCTGCATGCAATG	SNP sequnencing SNP sequnencing
TT57259seq_1 TT57259seq_R	TTAATTAGGCGTAGCATTGG	SNP sequinencing
SSR_chr.9_57337_F	TGACGCTTCGGTCGAACCAG	fine mapping
SSR_chr.9_57337_R	AACACAGGATGAGGACCATG	fine mapping
SbYUC7_F2 SbYUC7_R1	CTAGCTCATCGTTCACCACC GGGAGAAGAGACTGTCCATG	fine mapping fine mapping
Sb09g028270 F1	ATTTGCAGCTGGATCTGATC	sequnecing (Sobic.009G229800)
Sb09g028270_R1	GAACATACGAAATGTTAGTG	sequnecing (Sobic.009G229800)
Sb09g028270_F2	ACACCTGGGATAATCCTTGC	sequnecing (Sobic.009G229800)
Sb09g028270_R2	TGAACCACCAGAATAGGCTG	sequnecing (Sobic.009G229800) segunecing (Sobic.009G229800)
Sb09g028270_F3 Sb09g028270_R3	CCAGATGTTCCATATGCTCG ACCTTTGAACACGTCCAAGC	sequnecing (<i>Sobic.009G229800</i>) sequnecing (<i>Sobic.009G229800</i>)
Sb09g028270_10	GATAAATCATGTGCCTACGC	sequnecing (Sobic.009G229800)
Sb09g028270_R4	GATTGATTGTGTTACACAAG	sequnecing (Sobic.009G229800)
Sb09g028270_F5	GGCACGTACGTACAATCAAG	sequnecing (Sobic.009G229800)
Sb09g028270_R5	ACTGAAGACATCTCTGACTG AGGAGTTACTACAATCTGAG	sequnecing (Sobic.009G229800)
Sb09g028270_F6 Sb09g028270_R6	CAAATAATCTACGTGTCTTC	sequnecing (Sobic.009G229800) sequnecing (Sobic.009G229800)
Sb09g028270 F7	CGTGTCTGACTACTCAGATC	sequnecing (Sobic.009G229800)
Sb09g028270_R7	GCACATGCTTTCTCATGACG	sequnecing (Sobic.009G229800)
09g028310_1F	GGCGACTGGTTCAACTTCAA	sequnecing (Sobic.009G230200)
09g028310_1R 09g028310_2F	GGCCGTACACTTGATAAATC ATTACGAGAAATTATTCAAG	sequnecing (Sobic.009G230200) sequnecing (Sobic.009G230200)
09g028310_2F	GCCCGAGATTATTCAAG	sequnecing (Sobic.009G230200)
09g028310_3F	AGAGTAGCTAGTTAGATTCG	sequnecing (Sobic.009G230200)
09g028310_3R	CCTTGCCATGGCGCATAACG	sequnecing (Sobic.009G230200)
09g028310_4F	CTACTTCCAGAACGCCTTCG	sequnecing (Sobic.009G230200)
09g028310_4R 09g028310_5F	AGGTTCACGAACGGGTACAG GTTCATCATGTTCGGCGGTC	sequnecing (Sobic.009G230200) sequnecing (Sobic.009G230200)
09g028310_5R	CAAGGTGACCTTCACGTCGG	sequnecing (Sobic.009G230200)
09g028310_6F	GCCGTACCTCAGCGATGATG	sequnecing (Sobic.009G230200)
09g028310_6R	GGACCAGAATGAAACATCCA	sequnecing (Sobic.009G230200)
09g028275_ex1_RT_F 09g028275_ex2_RT_R	TCAGAAGGTGGATAAATCATGTGCCTACGC CTCGATTTCTGCATCTGAGCAAGAATGGCC	RT-PCR RT-PCR
028280ex2 RT1 F	CTCTGCTCTTGCCCTGTCCA	RT-PCR
028280ex4_RT2_R	TCATTTGTAGATCCTGACGC	RT-PCR
09g028290_3'UTR_RT_F	ACCGTGAAGCGGCGGTGGAGATACTGGAG	RT-PCR
09g028290_3'UTR_RT_R 09g028300_3'UTR_RT_F	TCGTGCCCCTGTCACGGCCCAGACAGGTAC GACCGCGGAAGGAAGCTAACTTGGCAAGAC	RT-PCR RT-PCR
09g028300_3'UTR_RT_R	GCCAGAACACCAGCACCTTCAGAGTTTCAG	RT-PCR
09g028310_ex1_RT_Fb	CATGGCAAGGCCGTCATGTTCGATACCAGC	RT-PCR
09g028310_ex2_RT_R	CAGCCAGTCGCAGGTGTCGCACGGGCTCAG	RT-PCR
sb_01g030340_F sb_01g030340_R	GGTTCGGGAGGTGGCCTAGGT AGCATGTACATTCCCAGCGGTA	RT-PCR (sorghum ubiquitin) RT-PCR (sorghum ubiquitin)
Sb_PRR37_F1	GCTTATTTGACATGGCAATG	sequnecing (SbMa1)
Sb_PRR37_R1	GACAGCATAGAGCTGTGAAC	sequnecing (SbMa1)
Sb_PRR37_F2b Sb_PRR37_R2b	GCTAGCTAGGAATAAGTTAC ACCGTTAGAGCAGAATAATG	sequnecing (SbMa1)
Sb_PRR37_R2b Sb_PRR37_F3	CACGGAACGAGTGTGG	sequnecing (SbMa1) segunecing (SbMa1)
Sb PRR37 R3	CACCATCGTCATCCTGG	sequnecing (SbMa1)
Sb_PRR37_F4	ACTAATCTCGACGAACTACG	sequnecing (SbMa1)
Sb_PRR37_R4	GGATGATGCTTCGGAATAAC	sequnecing (SbMa1)
Sb_PRR37_F5c Sb_PRR37_R5c	GCCACCTCTGACACGTAG CTAACTCAGATAGCTAGGTG	sequnecing (SbMa1) segunecing (SbMa1)
Sb_PRR37_F6	GCCACTACGATAGCTATATAC	sequnecing (SbMa1)
Sb PRR37 R6	ATCCTCCTTGGACCATGCAC	sequnecing (SbMa1)
Sb_PRR37_F7	CGGCAAGAGGATAGATCTAG	sequnecing (SbMa1)
Sb_PRR37_R7	AGAGAAGCCAAGTGCTCTTG	sequnecing (SbMa1)
Sb_PRR37_F8 Sb_PRR37_R8	ACTGTTCTCCAACAATAAGC TCTTGCATATCACAGGACAC	sequnecing (SbMa1) sequnecing (SbMa1)
Sb_FRR37_R6 Sb_PRR37_F9	GACTTTGAATCTTTAAGGCC	sequnecing (SbMa1)
Sb_PRR37_R9	ATGGTATACTCTTTCGC	sequnecing (SbMa1)
Sb_PRR37_F10	GGTAAGAATGAAATTACCTC	sequnecing (SbMa1)
Sb_PRR37_R10 Sb_PDR37_E11	ATAGTGTGAGTCTCTCGCC	sequnecing (SbMa1)
Sb_PRR37_F11 Sb_PRR37_R11	TCTAATACTCTTCACCGTTG GTCAAACTTACCACTTGTGG	sequnecing (SbMa1) sequnecing (SbMa1)
Sb_FRR37_R11 Sb_PRR37_F12	CATAGGTTTGGCTACCATAG	sequnecing (SbMa1)
Sb_PRR37_R12	CCGTCTCCATACATGCTGCC	sequnecing (SbMa1)
Sb_PRR37_F13	TCGAATGATGCTAGGAATAC	sequnecing (SbMa1)
Sb_PRR37_R13	AGAATTCACTGCAGACCTAG TGGTCAATCCACATAGCAGC	sequnecing (SbMa1)
Sb_PRR37_F14b Sb_PRR37_R14b	TGGTCAATCCACATAGCAGC TCTCGTACGGCATTCCATGC	sequnecing (SbMa1) sequnecing (SbMa1)
Sb_PRR37_F15	GTATTCCGAGAATAGTGTAC	sequnecing (SbMa1)
Sb_PRR37_R15	GAAGTCGTCTGGAATCAACC	sequnecing (SbMa1)
Sb_PRR37_F16	TGGTACTGATTCACTATGC	sequnecing (SbMa1)
Sb_PRR37_R16	AGGGCAACATTACCCTGTCC	sequnecing (SbMa1)

Sb PRR37 F17	AATGACATGGGTTCCACTAC	segunecing (SbMa1)
Sb_PRR37_R17	AGTCCTGCCCAATATAATGC	sequnecing (SbMa1)
Sb_PRR37_F18	TGCATGTTTGTGGTTCAGGC	sequnecing (SbMa1)
Sb_PRR37_R18	AGCTAACACAACTGCTGTTC	sequnecing (SbMa1)
Dw3_F1	GCTCTGCGCCAGCCACTCTG	sequnecing (Dw3)
Dw3_R1	TGAGCGACTGATGTGATTCG	sequnecing (Dw3)
Dw3 F2	CGTCCTCATGGGCAGGTAAC	sequnecing (Dw3)
Dw3 R2	CGATCATGACGGAGAACATG	segunecing (Dw3)
Dw3 F3	TCGGTCACCGCAGCGGCTTC	sequnecing (Dw3)
Dw3 R3	AATGTACGCCTGCTACAGTG	segunecing (Dw3)
Dw3 F4d	GAGTAGGAGTGGTTCAATTG	sequnecing (Dw3)
Dw3 R4d	GGCAGGCAGGCATGGTGGTC	segunecing (Dw3)
Dw3 F5	GCAATGCTCGCATGCCCATG	segunecing (Dw3)
Dw3 R5	ACTCGGGCGAGTTCATCCTG	segunecing (Dw3)
Dw3 F6	TTCTCCACCTCCGACTTCAC	segunecing (Dw3)
Dw3 R6	TCTTGCGCTCCGCGTTGAAC	sequnecing (Dw3)
Dw3_F7	TCCGTCATCGTCCAGAACTC	sequnecing (Dw3)
Dw3_17 Dw3_R7	GCCGCAGGTTGTACTTGCG	segunecing (Dw3)
Dw3_R/ Dw3_F8b	AGCACGTGGACTTCTCGTAC	segunecing (Dw3)
Dw3_F6b Dw3_R8b		segunecing (Dw3)
· - · · · ·	TGCGATCATGGGAGTACCAAACTCCC	RNAi construction
01g0103800RNAi_EcoRV_F 01g0103800RNAi Smal F	CGATATCGCCAATTCCAACCAAAGTGCG TCCCCGGGGCCAATTCCAACCAAAGTGCG	RNAI construction RNAi construction
01g0103800RNAi_Smai_F	GCTCTAGAGACCTCTTGCTCAGCGATGGGC	RNAi construction
01g0103800RNAi_Xbai_R 01g0103800RNAi Spel R	GGACTAGTGACCTCTTGCTCAGGGATGGGC	RNAi construction
09gRNAicheck F1	CCGGATGCCGACGCGAAGCG	RNAi construction
09gRNAicheck R1	CTGAGGCTCGTTAGCATACG	RNAi construction
5-liker MCS-Nos 3 UTR F	TGTGAATTACAGGTGACCAGCTCG	RNAi construction
5-Nos 3 UTR_R	TATCGCGTATTAAATGTATAATTGC	RNAi construction
Os01g_RT_F	TTTCCGGAGAATGTGACCGC	RT-PCR (Os01g0103800)
Os01g_RT_R	AATTAGGTGATTGGGCAGTC	RT-PCR (Os01g0103800)
Os03g_RT_F	GAATGTGACCGGAGCAACCG	RT-PCR (Os03g0270700)
Os03g_RT_R	AGAAGGACGCCGGAGAAGAT	RT-PCR (Os03g0270700)
Actin_F	CATCTTGGCATCTCTCAGCAC	RT-PCR (rice actin)
Actin_R	AACTTTGTCCACGCTAATGAA	RT-PCR (rice actin)
SSR_chr.9_57179_F	TAAGATTCTCCGTCACATAG	NIL genotyping (Dw1)
SSR_chr.9_57179_R	ATAGACCGTAAAGTTGCACG	NIL genotyping (Dw1)
SSR_chr.9_57354_F	TTTCGGATACTGTAACCGAC	NIL genotyping (<i>Dw1</i>)
SSR_chr.9_57354_R	TTTAGAGATTGTCGTGTCGC	NIL genotyping (Dw1)
SSR3_4143_F SSR3_4143_R	ATCTCCTTTAATTACGACCGACCGA GTTTCTCCATGGATCGACCCTTTTGTT	NIL genotyping (<i>Dw3</i>) NIL genotyping (<i>Dw3</i>)
SSR3_4145_K SSR3_4197_F	ACGATCGAGTTTTCTTGTGGTGTTC	NIL genotyping (<i>Dw3</i>) NIL genotyping (<i>Dw3</i>)
SSR3 4197 R	GTTTCATGCATCCATGTTCGTCTTCTCT	NIL genotyping (Dw3)
BAR RBCter F	CGACTCTAGAGGATCCATGGCAATTACCTTATCCGC	Sorghum complementation
BAR RBCter R	GCAGGTCGACGGATCCCAAACATATAGTAGATGCGAC	Sorghum complementation
pUbiin BAR RBCter F	TCGCCCCCGGCCTGCAGCGTGACCCGGTCG	Sorghum complementation
pUbiin BAR RBCter R	TATGGAGAAACTCGACAAACATATAGTAGATGCGAC	Sorghum complementation