

Table S1. Centromeric Repeat Junction Markers. Markers are listed with the BACs from which they were derived, the two primer sequences used for amplification, amplicon size (in nt), marker type (P/A=presence/absence, SNP=single nucleotide polymorphism). The centromere to which each marker was mapped using the IBM mapping population is indicated by the marker name. Primer sequence in **bold** was used to sequence the SNP markers.

| Marker Name | Centromere | BAC Name (ZMMBB) | F Primer Sequence | R Primer Sequence | Amplicon Size (nt) | Type |
|-------------|------------|------------------|--------------------------|-----------------------------|--------------------|------|
| CenUH_01.1 | 1 | b0010G12 | GGAACCATTTCGTCGTTTTT | GTGGATGTCTTCATCATGTGG | 582 | P/A |
| CenUH_01.2 | 1 | b0395M04 | TGTCCGCATCACCTAGGATA | TCGGAATTGATGAAGACATCC | 1851 | P/A |
| CenUH_02.1 | 2 | b0061K01 | AATCTCCGCCATTCATCAAC | GATGCAGTGTCTGGAAATGG | 829 | P/A |
| CenUH_02.2 | 2 | b0174C04 | TAGTCCATCCCTGCATTTGG | GTTGATTTGTAGGGCGATGG | 769 | P/A |
| CenUH_02.3 | 2 | b0008G14 | GTAAACACACCCGCCACCAA | CTCCCTGCTCCACCTCTTC | 799 | P/A |
| CenUH_02.4 | 2 | c0149I02 | GATTTTAGAAGAAAGTGCAAT | GGGACGCTTCACCCTACCATG | 506 | P/A |
| CenUH_02.5 | 2 | c0154H24 | CGCAATTTCTGTTGCTGATAGA | CATGGTCCCAATAGTCGGTAAC | 166 | P/A |
| CenUH_03.1 | 3 | c0024O03 | AGGATGTCCTCATCATTGGTTC | CAAACACCAAAACACCAAAAGA | 1356 | P/A |
| CenUH_04.1 | 4 | c0382E13 | GTGATGTCCTCATCACTTCTTTTG | CATCCGGTCCGTCTGATAGA | 1689 | SNP |
| CenUH_05.1 | 5 | c0026E18 | CACCAAGCACTACCGGAAT | GTCATGCTATGATTGCCACTGA | 1956 | P/A |
| CenUH_06.1 | 6 | c0462I03 | GGATGTCTTCATCAGATCTCCAA | ATGGGAAGTTTTGTTTATTTTCG | 1452 | P/A |
| CenUH_07.1 | 7 | b0346P08 | TGTCTTCATCAAAAAGTGAACA | GGGTTTCATCAAATCCCTCGT | 291 | P/A |
| CenUH_07.2 | 7 | c0447A01 | CGAAGGTGTACGGGGAAATCTA | GGTCGTCAGATCCCTGGTTACT | 179 | P/A |
| CenUH_08.1 | 8 | b0089F07 | GCCTATCAGCCTATCCCACA | TGCTCACCTTGAGTGCAAAC | 578 | P/A |
| CenUH_09.1 | 9 | c0530C10 | GATGTCCGCATCAAATATGTCA | CTGTTGGGTTTATCAGCTACCAA | 816 | P/A |
| CenUH_10.1 | 10 | b0410L22 | CCTAAGGACTCATGTAGAAGCCAA | GGGTGCACATCAATGAGCTTA | 1438 | P/A |