

Genetic diversity in sorghum (*Sorghum bicolor* L. Moench) accessions using SNP based Kompetitive allele-specific (KASP) markers

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Supplementary Table 1. Accession name/number, country of origin, geographic region and breeding status of sorghum accessions used in this study.

No.	Accession Name/ Number	Country of Origin	Geographic Origin	Breeding status
1	SA0530	USA	N America	B-line
2	SA0550	USA	N America	"
3	SA0560	USA	N America	"
4	SA0682	USA	N America	"
5	SA1278	USA	N America	"
6	SA1282	USA	N America	"
7	SA1442	USA	N America	"
8	SA1556	USA	N America	"
9	SA1562	USA	N America	"
10	SA1564	USA	N America	"
11	SA1646	USA	N America	"
12	SA1678	USA	N America	"
13	SA1730	USA	N America	"
14	SA1732	USA	N America	"
15	SA2020	USA	N America	"
16	SA2080	USA	N America	"
17	SA2840	USA	N America	"
18	SA0526	USA	N America	R-line
19	SA0529	USA	N America	"
20	SA0546	USA	N America	"
21	SA0567	USA	N America	"
22	SA0572	USA	N America	"
23	SA0575	USA	N America	"
24	SA0583	USA	N America	"
25	SA0597	USA	N America	"
26	SA0614	USA	N America	"
27	SA0615	USA	N America	"
28	SA0622	USA	N America	"
29	SA0623	USA	N America	"
30	SA0670	USA	N America	"
31	SA0671	USA	N America	"
32	SA0672	USA	N America	"
33	SA0673	USA	N America	"

34	SA0680	USA	N America	"
35	SA0696	USA	N America	"
36	SA0700	USA	N America	"
37	SA0720	USA	N America	"
38	SA0755	USA	N America	"
39	SA0808	USA	N America	"
40	SA2011	USA	N America	"
41	SA2093	USA	N America	"
42	SA2097	USA	N America	"
43	SA2721	USA	N America	"
44	SA2748	USA	N America	"
45	M100	RSA	SADC	B-line
46	SA0009	RSA	SADC	"
47	SA0020	RSA	SADC	"
48	SA0037	RSA	SADC	"
49	SA0062	RSA	SADC	"
50	SA0108	RSA	SADC	"
51	SA0109	RSA	SADC	"
52	SA0123	RSA	SADC	"
53	SA0126	RSA	SADC	"
54	SA0133	RSA	SADC	"
55	SA0139	RSA	SADC	"
56	SA0213	RSA	SADC	"
57	SA0223	RSA	SADC	"
58	SA0260	RSA	SADC	"
59	SA0273	RSA	SADC	"
60	SA0347	RSA	SADC	"
61	SA0390	RSA	SADC	"
62	SA0842	RSA	SADC	"
63	SA1734	RSA	SADC	"
64	SA2451	RSA	SADC	"
65	SA2453	RSA	SADC	"
66	SA2471	RSA	SADC	"
67	SA2690	RSA	SADC	"
68	SA2692	RSA	SADC	"
69	SA2714	RSA	SADC	"
70	SA2849	RSA	SADC	"
71	Framida	RSA	SADC	R-line
72	SA0117	RSA	SADC	"
73	SA0190	RSA	SADC	"
74	SA0369	RSA	SADC	"
75	SA0423	RSA	SADC	"
76	SA0718	RSA	SADC	"
77	SA3125	RSA	SADC	"
78	SA3711	RSA	SADC	"
79	Belele Lehubedu	RSA	SADC	Landrace

80	Lenthate	RSA	SADC	"
81	Mabele a sesotho	RSA	SADC	"
82	Makhumusha coll.	RSA	SADC	"
83	Mammopane	RSA	SADC	"
84	Mamolokwane	RSA	SADC	"
85	Manthate	RSA	SADC	"
86	Mapimkana	RSA	SADC	"
87	Maseka a swere	RSA	SADC	"
88	SA0920	Botswana	SADC	B-line
89	SA0954	Botswana	SADC	"
90	SA1072	Botswana	SADC	"
91	SA1092	Botswana	SADC	"
92	SA1117	Botswana	SADC	"
93	SA0930	Botswana	SADC	R-line
94	SA3710	Lesotho	SADC	"
95	SA4000	Lesotho	SADC	B-line
96	SA0221	Swaziland	SADC	"
97	SA4167	ICRISAT-Zim	SADC	R-line
98	Hakika	ICRISAT-Ken	E Africa	"
99	Wahi	ICRISAT-Ken	E Africa	"
100	SA2913	Australia	Australia	B-line

Supplementary table 2. Summary of the number of KASP markers used in the study.

Chromosome	KASP markers
1	15
2	16
3	14
4	13
5	11
6	11
7	12
8	19
9	12
10	13
Total	136

Supplementary table 3. KASP marker information

SNP ID	Chromosome	AlleleY	AlleleX	Sequence
SB00028_3	3	C	T	TATTGAGCACTCCTT[T/C]GGAGAGGAGCTCTT
SB00069_1	1	G	A	CTTGAGCTCCTCACCA[A/G]CCGCCCTCCCTCC
SB00082_3	3	T	A	AGAGCCTCCTTCTCC[A/T]GATCCCTTACCAT
SB00119_2	2	C	A	GGAATCTAATGATTT[A/C]ATTACGCCATCAAT
SB00128_2	2	G	C	AACGGAGCGCCTGTC[C/G]CTATGGAAAGCCGA
SB00134_1	1	G	T	CGAGGAGAAGGCCAC[T/G]CCTGAGCAAGTAGC
SB00135_1	1	G	T	GTCAGCTGGTCCGGC[T/G]CACTCCCGAAGCAC
SB00165_1	1	G	C	CGCTTACACCCTCTC[C/G]GTACGCCATGGACG
SB00212_1	1	G	T	GTTAAGCAGAACTAC[T/G]AGCATTTTTCACTC
SB00214_1	1	G	T	TTGAATGTTGGTCCT[T/G]TTAATCCGGYTGT
SB_01_001	1	C	T	ACTCCAGTTGGTTAC[T/C]ATGCACCAAGCAGG
SB_01_012	1	G	A	GCTGTTGTAACTTCA[A/G]AAAGGTTGTGACCA
SB_01_041	1	C	T	AAAGGAAAAAGTCGG[T/C]GAACTGTATCCACG
SB_01_054	1	C	A	TTGCTTCAGTCTATT[A/C]GCATCTATGGCCGT
SB_01_061	1	G	A	ATCATCAGCAAATTA[A/G]TTTGGCAATTTGCA
SB_01_074	1	C	T	ATTGCTTCCGTGTAG[T/C]GTCCACCAGGATTA
SB_01_090	1	G	A	CGGTGGGATACCACT[A/G]GCTGGTGACCTTAC
SB_01_102	1	G	A	TGTATTGTGATAGGA[A/G]GCCTCACCTGAAT
SB_01_110	1	G	C	GCCTTTCGATTCTGA[C/G]CTGAGCTTTTCGTC
SB_01_116	1	C	A	CTCTCCCTCTTGTGT[A/C]TCGTCGTTTTTCATC
SB_01_120	1	G	A	TCCATTTTCGTAATTT[A/G]CTTTTTCCGATTCC
SB_01_126	1	C	T	GTATGAAGTACGTCA[T/C]AATGAGCTAAGCAG
SB_01_140	1	G	T	GTAGGGAGGCCGTGA[T/G]GATTAAGATTTTC
SB_01_152	1	C	A	CTCACGGCTGTCCTA[A/C]AAAAAAAAACGTTA
SB_01_160	1	C	A	CAGATGGATGGACTA[A/C]ATTCCTTTTGATAT
SB_02_001	2	G	C	CGCAGGCGGTACTTT[C/G]GCCCTCTACTCGCT
SB_02_013	2	G	T	GGACCCAGCAACAGT[T/G]ATTGTGTAGTACGT
SB_02_020	2	C	T	GAGCAGTTCAGTGCA[T/C]TATTGCTTGCACTG
SB_02_025	2	C	A	CACTTCCACATCGTC[A/C]TGTTCTGGGAGGAG
SB_02_037a	2	C	T	GGGAAAGCAGCAGAA[T/C]GGAGAAATCAAAAA
SB_02_044	2	G	A	TGGAGGCTCTGGATC[A/G]ACCTGACAAGCACA
SB_02_057	2	G	A	AGCTTCAAGTCTGC[A/G]CCAGCAAGCCGGTG
SB_02_084	2	G	A	AAATATATGCTTCCT[A/G]TGAGTTTAATGCAG
SB_02_092	2	C	T	AGTCCATATGATGAT[T/C]AAGCAGCTTGACAGG
SB_02_099	2	G	T	ATTTCAATTCATTCGT[T/G]CGTTTCGTCGAGCTC
SB_02_103	2	G	A	CCTACGTATGAGATC[A/G]TCATCTGATGAGTA
SB_02_109	2	G	T	GGAGGTTAGATTTGG[T/G]TTGGGTGGGGATGG
SB_02_129	2	G	C	AAGCTGGTGGCCAGA[C/G]CGAGCTATATAGAG
SB_02_152	2	G	T	CCTGATGCGGACTGC[T/G]GCCTACTAGGTAGC
SB_02_166	2	T	A	CAGCTCGTGAGAGTC[A/T]GAGCATTAACTCT
SB_02_173	2	G	A	TGCTAGCCTGAAAGC[A/G]GAACAAGACAGATT
SB_03_001	3	G	A	TACCAAACGTGTGAG[A/G]ATCTACCTCCACAT
SB_03_012	3	G	C	GTACACGTGTACGCC[C/G]GCCATAGATTACCT
SB_03_022	3	C	T	ACAGTCACATTCAAG[T/C]GCCTAGCTGTATAT
SB_03_031	3	G	A	CATACACCATAGTAG[A/G]CATGTTTCAATTCA

SB_03_041	3	G	A	AATGCAGGTGAGAGG[A/G]GTAAGGCAAATGCA
SB_03_050	3	G	T	ACACGGCCCCGCCTC[T/G]TTAATTAGTCACTT
SB_03_060	3	C	T	AGGCGATGAGGTTTT[T/C]CATGACCAACAACG
SB_03_068	3	G	C	GTCGTGTCGGCGTC[C/G]TTAATGAAGGAGGG
SB_03_086	3	G	A	TCTTCTTCGTGTAC[A/G]GTCGAACCGCACAA
SB_03_094	3	G	A	AAACCAGGGAAGAAA[A/G]TTGGGTGCACACTG
SB_03_107	3	G	A	ATCAAGTTGTTTCTC[A/G]TCATGAAAGCTTGG
SB_03_133	3	G	A	GTAGCCATTCCAGTA[A/G]GATACGGATGCTTC
SB_03_161	3	G	A	AGCTGGAGTAACAGG[A/G]CTCCTACACCTACA
SB_03_170	3	C	T	AACTATCATACTGCT[T/C]ACAGCTCACCTGGT
SB_04_001	4	T	A	ATATGGACGTGTGCT[A/T]GCCGAATCGCCCCG
SB_04_014	4	G	T	GGTGAAGTTGTTTGC[T/G]GCAACATCTAATCG
SB_04_027	4	C	T	GGAGAAGAAGTCGAG[T/C]AGCGGGCGGAGGTA
SB_04_033	4	G	C	GTGCTTCAACGCTAG[C/G]TGCTGGCTACCTCT
SB_04_044	4	C	T	TGTCCTCTTTGATCA[T/C]TTTGGAGCAGTGAC
SB_04_081	4	G	A	CACGTGCCAAGACA[A/G]CAACGTACAGTGCT
SB_04_088	4	G	C	ACTGTTGGTAGCCTG[C/G]CAGTCTGGTAGTAG
SB_04_095	4	G	A	GACATTGTCATCATC[A/G]AACGACAGCCAATG
SB_04_110	4	G	A	ACGCCGGTCAAGCTA[A/G]GATAAGGTGGTGTG
SB_04_117	4	G	A	AAGTTCAAAGTGCCA[A/G]ACTGTCAGTCCTCC
SB_04_141	4	G	A	ACCGACGGCCAAGAC[A/G]TATTCGATTATGAT
SB_04_146	4	C	T	ATATGCATAGCGTAG[T/C]GCAACTAACCACCA
SB_04_156	4	C	T	ACAAATACACCACCA[T/C]CAAGCGAGCTGCTA
SB_05_001	5	G	C	ATGAACAAGAAGCTA[C/G]TAGCTTAGTAGTAG
SB_05_011	5	C	A	TCGGCCGGTCGCTAC[A/C]CTACACCCATACGA
SB_05_019	5	G	T	CTCGTCACTGTGGTG[T/G]GGAGTCCGTGGGAC
SB_05_032	5	G	C	ATCTGGGCGGTTATG[C/G]TTCTGGTGTACGG
SB_05_043	5	G	A	CGGCCATCCTAATCG[A/G]AAGAAAAGATGTAA
SB_05_068	5	C	T	AGCTTATCTTCATTT[T/C]TGGCAATCATAACT
SB_05_095	5	T	A	GAGGTCCATTTGACC[A/T]ATTTCTGTCCGGA
SB_05_108	5	G	A	CATGGTTGGCGCTTC[A/G]CCCTCACCTGAAGC
SB_05_114	5	C	T	TTCCATCTCCATGA[T/C]TGCGTCTGCGATTG
SB_05_124	5	G	A	TTTCAACTTGACAC[A/G]CTGGGTGTTCTTAA
SB_05_138	5	G	A	GTGTAGCTAGTGTA[A/G]TACGATACGATTG
SB_06_001	6	C	A	TCTTCAAGATCAAGA[A/C]TCGATCGATCAACC
SB_06_012	6	G	A	ACAAATGACAGTACC[A/G]GTAAGGGTAGCA
SB_06_015	6	G	A	AGCTGACTACGAGAT[A/G]TACACCCCTGTAAC
SB_06_040	6	G	T	TTTCAGTCTAGTTTT[T/G]CCTTTTGGTCGGGA
SB_06_049	6	G	A	CAGAGACGAAGAACA[A/G]GTGAATTACGAGAC
SB_06_061	6	C	T	TCGAAGCACAGCAGG[T/C]TCTTCAGCTTTGCT
SB_06_078	6	C	T	TCCTCTGTATCATAA[T/C]GTACCCGGTAGACT
SB_06_090	6	G	A	CTCTGCGCTGTCCA[A/G]CTTTTGGGCGTACT
SB_06_106	6	C	T	GATTAGGGCTACACA[T/C]TGACCCTACCCAGC
SB_06_119	6	G	A	TGCTGGCCAGTGAAC[A/G]CTCCAGCAAGTCCA
SB_06_137	6	G	T	TGCTTAAAGCACAG[T/G]AACTATTGCGAGC
SB_07_001	7	G	A	TGCTACGACGACGAC[A/G]TGGGTTTTAGTACA
SB_07_012	7	G	C	CTTGAGGTCTGATC[C/G]GATGGAGCTGGTCC
SB_07_022	7	C	A	ACCGAAATGGCGTCT[A/C]TGTGTGAAGTGGGC

SB_07_028	7	C	A	ACAAGCTGCTACAAC[A/C]TGAACCTCGGAGAG
SB_07_036	7	G	A	AAGAACCAGCAGTCG[A/G]CGACAGCTGCTGAC
SB_07_044	7	C	T	ATAGGCCGGTGGTGG[T/C]GTCGACTGAGGAAG
SB_07_058	7	C	A	CGGCGCTTCCTTGC[A/C]CCTGAGTCTTCAAA
SB_07_070	7	G	A	CTCTAGGGGGTTACG[A/G]AAAACCTAGTGCA
SB_07_079	7	C	T	GGCAGATGCGGGGGG[T/C]GAATTGAAAAGCGC
SB_07_088	7	T	G	AGGTACTGGACCAAG[G/T]AACAGGAGACCAAC
SB_07_107	7	G	T	CACGGTGCAGTACCT[T/G]GACCAGTTCGCGCA
SB_07_126	7	T	A	AGAGAGAGATCTGGC[A/T]GGAGCTCGGCCAGG
SB_08_013	8	C	T	GTTTGCTTGCATTTT[T/C]GTTCCAGTCTCTTG
SB_08_018	8	G	A	GCCCGCCACTCTTTC[A/G]GCAACAACAGTGAC
SB_08_027	8	G	A	TCCGACAGATTCTGC[A/G]TAGCATTCTCATCC
SB_08_040	8	G	T	CGCCGATCTGAAGCT[T/G]CTTCTTTTATTGGC
SB_08_062	8	G	C	GTACACGTGCCGGAG[C/G]AGCTCGCAGACATC
SB_08_077a	8	G	T	TAGTTTTACTGTCAT[T/G]GTGGGACCCGGACC
SB_08_092	8	G	C	CAAGCACGACAACAA[C/G]AAAGATGGTACTTG
SB_08_095	8	G	T	TAAGATCCTCTGCAG[T/G]GATTTCAAGGTGCA
SB_08_109	8	C	A	CGTGTCCCAAGATTT[A/C]TTTTAGGGGCTCAG
SB_09_001	9	C	T	CCCTCTACTCGAGCA[T/C]CACTGGCCAGGGTG
SB_09_011	9	C	A	AACGCATGCATGAAA[A/C]GATCATTGCATCTA
SB_09_017	9	A	C	ACTTCTGAAAAGAT[C/A]ATCCTTCTAGAAA
SB_09_021	9	T	A	GTCGCTTGGCAGCAC[A/T]CATAGATAGGTTTG
SB_09_028	9	C	T	ACTACTACGGTTCAT[T/C]GGTCCCATCAGCCA
SB_09_044	9	C	A	TACGGCCGGCTAAAG[A/C]TGACCTCCGCTGCA
SB_09_061	9	G	A	TCATCTTGAATATCA[A/G]GATCAAATCTCGTG
SB_09_091	9	G	C	TGAGACTGCATTATT[C/G]ACGGGGTAAACAAC
SB_09_098	9	C	T	AAACATCCCAACGGG[T/C]AGTTCAGGCACTGT
SB_09_106	9	C	T	GCACTTGTCTTCTC[T/C]TTTTTTGAGATCT
SB_09_116	9	G	A	AGAACGAATTGACAG[A/G]CAGATACTACGGTA
SB_09_133	9	G	A	CTCCCAGCTGCAGTG[A/G]CAGTGTGACACACA
SB_10_001	10	T	A	CGGAGAAACCTCGAG[A/T]GCTTCAGAAACAGC
SB_10_012	10	C	T	GCTTTTGAAGCAATG[T/C]TTAGTGGATCAGAG
SB_10_019	10	C	A	TTCTAATTTTGGTG[C/A]CGCAACTGTTGTA
SB_10_029	10	C	T	TTCTGCTCCAAGGT[T/C]GACCTCTGTTATTA
SB_10_036	10	C	A	CACTACATGTTTACT[A/C]GCTATCAACTCGGT
SB_10_047	10	G	T	CCAGTGTGTGTGTGT[T/G]TTCTTTTATATATA
SB_10_055	10	T	G	CCACCCATCTTCTAG[G/T]GAGCCTTGTCTACA
SB_10_070	10	G	A	GATGAGGTAGTACTC[A/G]GGCATGCATTCTGT
SB_10_087	10	G	C	ATTGCTAATTTCTTG[C/G]CTTTTTCTTCCC
SB_10_102	10	G	A	GAACGCATACGCCAC[A/G]GGTGTTACATGTC
SB_10_107	10	G	T	GCTACTACGAGTTGT[T/G]GTTGGAGCTCTCGA
SB_10_116	10	G	C	CGTACACACATCCTT[C/G]TGTCGAGTGCTCAC
SB_10_124	10	C	A	ACCTTTCTTGCAAGTA[A/C]GCATCCATCCTCAC
