Table S1 Primer sequences and information for the goat *MSTN* gene

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Primers | DNA sequence (5’→3’) | Annealing temperature (℃) | Amplified region | Product size (bp) |
| P1 | Forward: CGCTGGAAAGCTGAGGAA | 57 | 77-877 | 801 |
| Reverse: AGACAAGTGTCGTCGGGATC |
| P2 | Forward: AATGAATCAGCTCACCCTTG | 59 | 748-1549 | 802 |
| Reverse: GCTCTTTGCCCTCCTCCT |
| P3 | Forward: GGCTCCTTGGAAGACGA | 57 | 1358-2190 | 833 |
| Reverse: TAGATATGTGCAGACCAGGTACT |
| P4 | Forward: GGTCTGCACATATCTAGGAGG | 55 | 2175-2857 | 683 |
| Reverse: TACCAATCAGTCTGGAGGAA |
| P5 | Forward: ATTCCCGAGGCTCAGTT | 54 | 2769-3552 | 785 |
| Reverse: CCTAAGTTGGATTCAGGTTGT |
| P6 | Forward: GAATCCGATCTCCGAAAC | 50 | 3444-4203 | 760 |
| Reverse: GCATCAGTAGTCTATACAACAAGG |
| P7 | Forward: GCTTTCCATTGATGTGCTAC | 56 | 3916-4852 | 937 |
| Reverse: GCCATGTCACCAACTTTG |
| P8 | Forward: ATTACCAGGTCTATTTTGATT | 55 | 4760-5446 | 687 |
| Reverse: GAGCTTTGTCTTGTTTCTTCT |
| P9 | Forward: TTCCTCCCTGCTCCTTTC | 56 | 5314-6029 | 716 |

Table S2 Estimated tag SNPs in different breeds

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Breed | Total count | Tag SNPs | | | | | | | |
| Boer | 4 | g. 425 C>T |  | g. 2732 C>T | g. 2738 G>A |  | g. 4552 A>C |  |  |
| Nubian | 6 | g. 425 C>T | g. 1583 A>G |  | g. 2738 G>A | g. 2752 G>A |  | g. 5167 C>T | g. 5427 G>C |
| Dazu | 5 |  | g. 1583 A>G |  | g. 2738 G>A |  | g. 4552 A>C | g. 5167 C>T | g. 5427 G>C |
| Youzhou | 2 |  |  |  |  |  |  | g. 5167 C>T | g. 5427 G>C |