

Gene	Primer	Sequence	Location	Previous sequences: Species (Sequence ID)	Goat regions GeneBank ID
<b>AMELY</b>	AMELYF	ACTTACACCTCTGAAGTGGTAT	Exon 3	<i>Ovis aries</i> (AY604731), <i>Bos taurus</i> (ENSBTAG00000047774)	MF448227, MF448228
	AMELYR	CCATCCACCAACGGGTTTCATAG	Exon 4		
<b>DBY</b>	DBY1F	ACACTGGCACTTGAATGTTG	3'UTR	<i>Ovis aries</i> (AY604732), <i>Capra hircus</i> (XM_018044671)	MF448229, MF448230
	DBY1R	CCTTGGCATGTTATAGTTTC	3'UTR		
	DBY2F	ATGGGRAACATTGARCTTAC	Exon 7	<i>Bos taurus</i> (ENSBTAG00000045750), <i>Homo sapiens</i> (NM_004660), <i>Sus scrofa</i> (KU705630), <i>Canis lupus</i> (JX964855)	MF448231, MF448232
	DBY2R	GGACCATCTGWATAAATCTGAC	Exon 8		
<b>UTY</b>	UTY1F	ACCGAGAAGCAAGACTAAGGAAG	5'UTR	<i>Ovis aries</i> (AY604736), <i>Bos taurus</i> (ENSBTAG00000046123)	MF448235
	UTY1R	GCCATCTTCGTGAAGGTTTCAG	Intron 1		
<b>ZFY</b>	ZFYF	CAGGAAATGGATGACAGTG	Exon 5	<i>Ovis aries</i> (SEG_AY604737S), <i>Bos taurus</i> (ENSBTAG00000007730)	MF448233, MF448234
	ZFYR	AGCACTTGCAGTGCCACTCCGA	Exon 6		

**Supplementary Table S1.** List of primers employed in the amplification and sequencing of Y-chromosome genes

SNP	Assay	Forward Primer Seq.	Reverse Primer Seq.	Reporter 1 Sequence	Reporter 2 Sequence
AMELY-42C>T	AMELY2	TGCAGCCTCATCACCACATC	GGAGTGTGGCCAGGAACTG	ACAGGCTGCTGAGCTG	CAGGCTGCTAAGCTG
DDX3Y-56C>G	DBYUTR	GAATGTTGAATGTCATCGTATATTACATAA	CTGGGTTTGCTTAGCTTGACTAAAA	AAGCTCACAGTAACCTG	AAGCTCACACTAACCTG
SRY-2971T>A	SRY1_1	GATTGGCCATTAGTTAGATGGTAGCATAT	GTGAGTGTTTCTGAAAGTACTATAGTTTGGA	CACTATAGACAATAAACTTT	CACTATAGACAATATACTTT
SRY-3098G>A	SRY1_2	TGGATGGAAAGCTCCCTACCTT	GGTGGAAAGTAGCTAGAAAGACCAA	AAGCACTTTCTGATACAAG	AAGCACTTTCTGGTACAAG
SRY-1876A>C	SRY2	GGCTGCCAGGAGGTATTGAG	GCTGTTCTTACCAGAGACTGACTT	TTCCTGCAAATTTT	CACTGCCAATTTT
ZFY-527A>G	ZFY1	TTGAGGTTTATGAATGTTTTCCCCAGAT	TGGTCCAGAAAACCTCAAATGACTGTAT	ATTGAAAGCCATACTTGCT	AAAGCCACACTTGCT
ZFY-46C>T	ZFY2	AGGTTTCATTGTCATAGGTTTCAGAAATATGA	GCATAAAGTAAGTTCTATTAAAGTTAAAGACAAATGA	CAGTTTTTACTTAAATCAGTTCAC	TTTTTACTTAAATCAATTCAC

**Supplementary Table S2.** Primers and reporters used in the genotyping assays of the Y-chromosome polymorphic positions.