

Table S1 A summary of the *JAK2* gene fragments used for DNA sequencing and subsequent identification of polymorphic sites

Primer (5' > 3')	Tm (°C)	Product size (bp)	sequence	possible SNP	status
LEFT PRIMER gaaggataacttaccagtgtcactttc	59.90	352	<i>Bos taurus</i> exon 3 (highlighted in blue)	rs377943180 synonymous A>G p.Glu12	not detected
			1 atgctatcag tgaagacttc tttatatatg aaggataact taccagtgtc acttttc atatt	rs458668038 synonymous T>G p.Leu43	not detected
			61 gtaactgggt tctcttacag gcaaatgttc tgaaaacgac tctgc atggg aatggcttgc		
			121 cttacaatga cagaaatgga A ggaacatcc acatccoctg tacatcagaa tggatgatatt	rs463147606 synonymous T>C p.Tyr44	not detected
RIGHT PRIMER aaaccaagcatatgttaataagaagaa	58.07		181 tctggaaatg ctaactctgt gaagcaaata gatccagtcc tacagggtcta tct TtaT cat		
			241 tcccttgga acgctgaggg ggattatctg cagtttctaa cT ggagagta tgttgctgaa		
			301 gagatctgta ttgctgcttc taaagcttgt ggtaagtatt aaaaaacagt gttt ttcttc		
			361 ttattaacat atgcttggtt tattatactc taacacaatg tacctgtgta a		
LEFT PRIMER gggccctggacatactaagt	60.75	265	<i>Bos taurus</i> exon 16 (highlighted in green)	rs383317698 synonymous T>G p.Thr59	not detected
			1 gggccctgga cactactaagt gctcaaatat ttgtgggtta atatttgaat gtttatgcaa	rs210330018 synonymous C>T p.Cys675	not detected
			61 ttaatttttaa tag gaagaaa aaacccttat tcatgggaat gtgtg cgcca aaaatattct		
RIGHT PRIMER cctctttcaagcaaaggtt	58.44		121 tcttatcaga gaagaagaca ggaagacagg aaatcctcct ttcatcaaac ttagtgatcc	rs210148032 missense A>G p.Ile704Val	detected and described as <i>JAK2/e16/RsaI</i>
			181 tggcattagt A ttacagttt tgccaaaaga ca gtaagtcc aacaggaatc aaatttaact		
			241 ttatt aacct ttgcttgga agagg tataa aaatcatgct gttaattttt ctcaaacact		
LEFT PRIMER aatcaagagttggcacatcaa	59.61	222	<i>Bos taurus</i> exon 23 (highlighted in dark grey)	rs461568961 synonymous G>T p.Leu1044	not detected
			1 ggta aaatca agagttggca catca agtaa ctctttttaaa tatattacag g tatgcacca	rs211067160 synonymous A>G p.Pro1057	detected and described as <i>JAK2/e23/HaeIII</i>
			61 gaatcactga cagagagcaa gttttctgtg gcttcagatg tttggagctt tg gagtgggt		
RIGHT PRIMER tcgaaacgcttttctcatgtt	59.87		121 ctG atgaac ttttcacata tattgacaag agtaaaagcc cA ccagcgt cagtatgctt		
			181 tttgtttact ttcaattttt ttttt aacat gagaaaaagcg tt tcgaaaga ataatagtaa		

Primer (5' > 3')	Tm (°C)	Product size (bp)	sequence	possible SNP	status
Ovis aries exon 6 (highlighted in pink)					
LEFT PRIMER ttgacctgttaaattgtatatgttctg	57.85	280	1 gag ttgacct tgttaaattgt atatgttctg aaaattatgc tatagattaa aatataataa	rs160146162 synonymous A>G p.Glu177	detected and described as JAK2/e6/Earl
			61 tagattaaaa tgtgatagtg aaacttaagt attttcttct atattttgtt tttacttttag		
RIGHT PRIMER ttgcataagaaaattacctgatagagc	60.36		121 tggcggcatg attttttaca tggatggata aaagtacccg tgactcatga aacacaggaa	rs160146160 synonymous G>A p.Thr196	detected and described as JAK2/e6/seq
			181 gaAtgtcttg ggatggcagt gttagatatg atgagaatag ccaaagaaaa gaatcaaacG		
		241 ccactggaca tctataggctc tatcaggtaa ttttcttatg caaatccata tgagtatgac			
Ovis aries exon 12 (highlighted in light grey)					
LEFT PRIMER ctcagtgtgttttgatttatgtata	54.71	253	1 ctcagtgtgt tttgatttta tgtata tttt ttcattcatt ctatcctttt tttaaacaga	rs592691324 missense G>C p.Asp519His	not detected
			61 caaatcaaac cttctagtct tcagaaccaa tgggtgtttct G atgtaccaa cctcaccaac		
RIGHT PRIMER gggtagaaaatgaagaacagttg	57.01		121 tttacaagg cataataaTg tgaaccaaat ggtgttccac aaaattagaa atgaagattt	rs1094682814 missense T>G p.Asn531Lys	not detected
			181 ggtatttgta agtcaataga tgctgattat tgcctttttg tcttttttaa caactgttct		
		241 tcattttcta ccc			
Ovis aries exon 13 (highlighted in yellow)					
LEFT PRIMER ggacatatctcctaattcccaca	59.11	220	1 ttggacatat ttcctaattc ccaca ttttt ttccatcctt aatcattctt tctttttttt	rs416867672 missense A>G p.Ile563Met	not detected
			61 tttttttttt ttttggttaa agaatgaaag ccttggccaa ggaactttta caaaaatttt		
RIGHT PRIMER caaacctctgaatagtttctatgtgc	59.66		121 taaaggtatA agaagagaaa taggagacTa tggtcagctg catgaaacag aagttctttt	rs1086855307 missense T>C p.Tyr570His	not detected
			181 aaaagttctg gataaagcac atagaaacta ttcagaggtt tg tatatattct ttatataatt		
Ovis aries exon 24 (highlighted in red)					
LEFT PRIMER tctgcttgaaattaaatgtaccaa	59.17	261	1 ttgagaatt c tgcttgaaat taaatgtacc aaa aatatgt cattgaaaag tgggtttgcg	rs160146116 synonymous A>G p.Leu1082	detected and described as JAK2/e24/ Hpy188III
			61 tttcag gaat ttatgcgtat gattggcaat gacaaacaag gacagatgat cgtgtttcat		
RIGHT PRIMER tcagtgaactgcataaactgacc	59.30		121 ttgatagaac tcctAaagaa taatggaaga ttacCgagac cagatggatg cccagatgag	rs1094390234 missense C>T p.Pro1089Leu	not detected
			181 gtaacaaaaa ttttttttat ccacagtaat catgcatttt ctttctcttt ttaccaag		
		241 atttc ggtc agtttatgca gttcactga a ct			
				rs429445187 intronic A>G	detected