

**Table S2.** Genotypic, allelic frequencies and diversity parameters of eleven SNPs in the Gobi short tail sheep and Ujimqin sheep populations.

Mutation/Breed	Genotype Frequency		Allele Frequency			Diversity Parameter				
						H <sub>o</sub>	H <sub>e</sub>	n <sub>e</sub>	PIC	$\chi^2$ (HWE <sup>2</sup> )
c.684G>A	GG	GA	AA	G	A					
GB	0.810	0.186	0.004	0.903	0.097	0.824	0.176	1.213	0.160	0.795
UM	0.699	0.255	0.046	0.827	0.173	0.714	0.286	1.401	0.245	1.851
c.687G>A	GG	GA	AA	G	A					
GB	0.364	0.459	0.177	0.593	0.407	0.517	0.483	1.933	0.366	0.562
UM	0.340	0.484	0.176	0.582	0.418	0.513	0.487	1.948	0.368	0.006
c.1203A>C	AA	AC	CC	A	C					
GB	0.234	0.519	0.247	0.494	0.506	0.500	0.500	2.000	0.375	0.354
UM	0.118	0.373	0.510	0.304	0.696	0.577	0.423	1.733	0.334	2.185
c.1560C>A	CC	CA	AA	C	A					
GB	0.364	0.463	0.173	0.595	0.405	0.518	0.482	1.930	0.366	0.346
UM	0.288	0.516	0.196	0.546	0.454	0.504	0.496	1.983	0.373	0.262
g.30484046C>T	CC	CT	TT	C	T					
GB	0.779	0.203	0.017	0.881	0.119	0.790	0.210	1.265	0.188	0.208
UM	0.824	0.170	0.007	0.908	0.092	0.834	0.166	1.199	0.153	0.075
g.30483701T>A	TT	TA	AA	T	A					
GB	0.429	0.433	0.139	0.645	0.355	0.542	0.458	1.845	0.353	0.691
UM	0.294	0.451	0.255	0.520	0.480	0.501	0.499	1.997	0.375	1.429
g.30032124T>A	TT	TA	AA	T	A					
GB	0.671	0.286	0.043	0.814	0.186	0.506	0.494	1.976	0.372	1.530
UM	0.745	0.229	0.026	0.859	0.141	0.697	0.303	1.435	0.257	0.751
g.30483678_30483676 AGAIndel	AGA.AGA	AGA.DEL	DEL.DEL	AGA	DEL					

GB	0.528	0.372	0.100	0.714	0.286	0.501	0.499	1.997	0.375	1.429
UM	0.333	0.444	0.222	0.556	0.444	0.592	0.408	1.690	0.325	1.784
g.30058882_30058873 GCAGATTAAAIIndel	GCAGATTAAA. GCAGATTAAA	GCAGA TTAAA.DEL	DEL.DEL	GCAGA TTAAA	DEL					
GB	0.658	0.290	0.052	0.803	0.197	0.684	0.316	1.463	0.266	1.597
UM	0.490	0.392	0.118	0.686	0.314	0.569	0.431	1.756	0.338	1.220
c.363G>T ( <i>T Gene</i> )	GG	GT	TT	G	T					
GB	0.000	0.108	0.892	0.054	0.946	0.898	0.102	1.114	0.097	0.756
UM	0.949	0.051	0.000	0.974	0.026	0.950	0.050	1.053	0.049	0.095
c.746A>G ( <i>FecB</i> )	AA	AG	GG	A	G					
GB	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	-
UM	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	-

Note: SE: Standard Error. H<sub>o</sub>: Observed Heterozygosity. H<sub>e</sub>: Expected Heterozygosity. n<sub>e</sub>: Effective Allele Numbers. PIC: Polymorphism Information Content. HWE: Hardy-Weinberg Equilibrium. GB: Gobi short tail sheep. UM: Ujimqin sheep.