

**Supplementary File**

Evolutionary Dynamics of the Casein Gene Family in Goat and Sheep: In-Silico Analysis of Structural, Functional and Regulatory Signatures

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Supplementary File

Table S1. Accession number of casein gene family of goat and sheep.

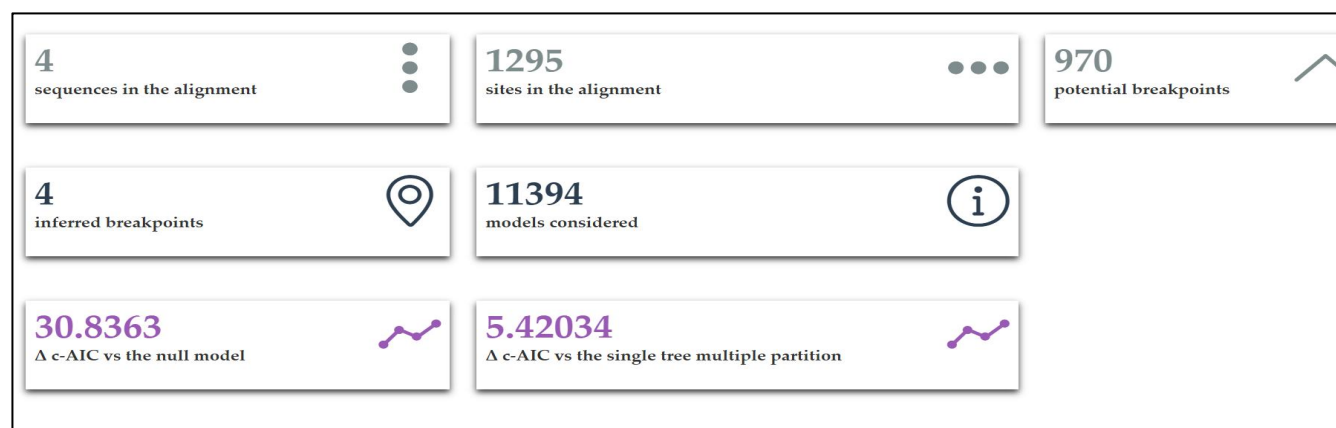
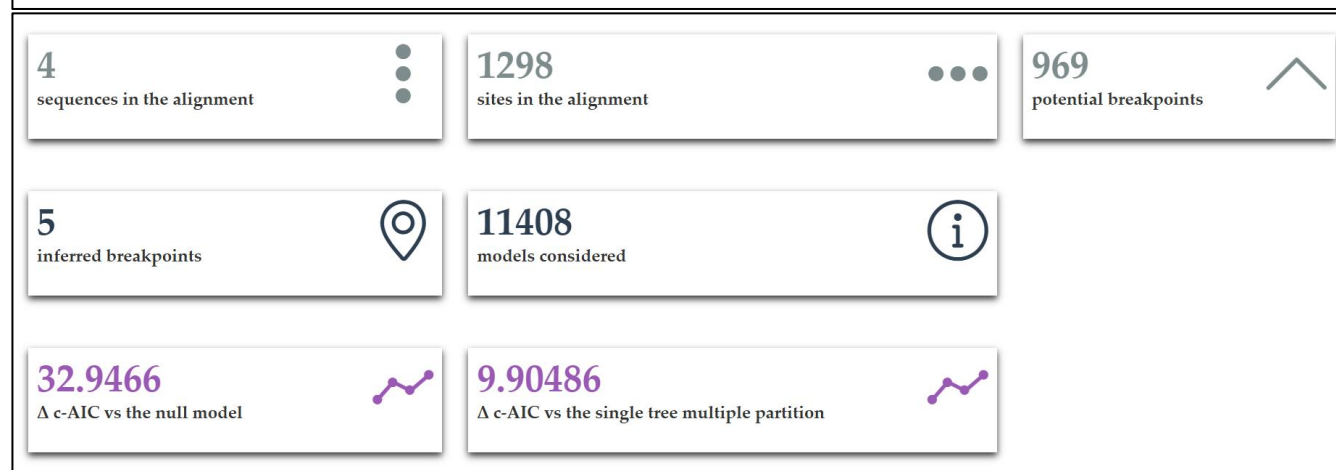
Sr no	Gene	Protein I.D	CDS I.D
Goat			
1	CSN1S1	XP_017904616.1	XM_018049127.1
2	CSN2	XP_005681778.2	XM_005681721.2
3	CSN1S2	XP_013820127.2	XM_013964673.2
4	CSN3	NP_001272516.1	NM_001285587.1
Sheep			
5	CSN1S1	XP_012034747.1	XM_012179357.5
6	CSN2	NP_001009373.1	NM_001009373.1
7	CSN1S2	NP_001009363.1	NM_001009363.1
8	CSN3	NP_001009378.1	NM_001009378.1

Table S2. Multiple alignment sequence variation between goat and sheep.

Sr	Gene	variations
1.	CSN1S1	Nil
2.	CSN2S2	I85V
3.	CSN2	L3V, I6L, I15L, L23V, L24V, V38I, L41I, V45I, A50S, S68A, I73L, Q88N, I99V, I142L, M143T, V148L, K149L, V166L, L177V, V180L, H184K, L185V, S192A, S202A, V205L, S216G, V220I.
4.	CSN3	V140I, I162V

Table S3. Casein Genes Promoter Region Prediction

Gene Name	Position (bp)	Score	Likelihood
CSN1S1_ <i>Ovis aries</i>	600	0.642	Marginal Prediction
CSN1S2_ <i>Ovis aries</i>	500	1.196	Marginal Prediction
CSN2_ <i>Ovis aries</i>	400	0.66	Marginal Prediction
CSN3_ <i>Ovis aries</i>	600	0.655	Marginal Prediction
CSN1S1_ <i>Capra hircus</i>	300	1.109	Highly Likely Prediction
CSN1S1_ <i>Capra hircus</i>	700	0.642	Marginal Prediction
CSN1S2_ <i>Capra hircus</i>	300	1.196	Highly Likely Prediction
CSN2_ <i>Capra hircus</i>	500	1.255	Highly Likely Prediction
CSN3_ <i>Capra hircus</i>	No promoter predicted	-	N/A

A**B****Figure S1.** (A) GARD analysis in goat and (B) GARD analysis in sheep.