

Table S4. Milk protein genes and their variants (adapted from Farrell *et al.* 2004 and Buchberger & Dovc 2000).

Gene	Chr.	Location	Gene description	Milk protein	Number of variants	Protein variants
<i>LALBA</i>	5 (q21)	34.385.300-34.390.400	<i>lactalbumin, alpha</i>	α - lactalbumin	3	A, B*, C
<i>CSN1S1</i>	6 (q26-q33)	88.294.650-88.295.570	<i>casein alpha s1</i>	α_{S1} - casein	11	A, B*, C*, D, E, F, G,H, X, X', Y
<i>CSN1S2</i>	6 (q31)	88.395.000-88.441.000	<i>casein alpha s2</i>	α_{S2} - casein	4	A*, B, C, D
<i>CSN2</i>	6 (q31)	88.322.000-88.345.400	<i>casein beta</i>	β - casein	17	A ^{1*} , A ^{2*} , A ³ , A ³ Mongolie, A ⁴ , A ⁵ , B*, B ₂ , B ₂ , C, D, E, F, G, H ¹ , H ² , I
<i>CSN3</i>	6 (q31)	88.511.600-88.544.300	<i>casein kappa</i>	κ - casein	16	A*, A ¹ , A _{1SS} , B*, B ² , C, E, F ¹ , F ² , G ¹ , G ² , H, I, J, X, Y
<i>LGB</i>	11 (q28)	107.163.200-107.175.000	<i>lactoglobulin, beta</i>	β - lactoglobulin	16	A*, B*, C, D, Dr, D _{Yak} , E, F, G, H, I, J, W, X, Y, Z
<i>IGHG1</i>	21 (q24)	60 M	<i>immunoglobulin heavy constant gamma 1</i>	immunoglobulin G1	2	IgG1 ^a , IgG1 ^b
<i>IGHG2</i>	21(q23-q24)	60 M	<i>immunoglobulin heavy constant gamma 2</i>	immunoglobulin G2	2	IgG2 ^a , IgG2 ^b
<i>IGHG3</i>	21 (q24)	60 M	<i>immunoglobulin heavy constant gamma 3</i>	immunoglobulin G3	2	IgG3 ^a , IgG3 ^b

*, common variants; M, location in mega base-pairs identified using bovine-human synteny map.