

**Table S2.** Correlation between MHC microsatellite (msat) haplotypes and serological (sero) ELA haplotypes in 218 serotyped and msat-typed horses<sup>a</sup>

msat Haplotype	sero ELA Haplotype	<i>r</i> <sup>b</sup>	Breed <sup>c</sup> (sero+/msat+)	sero-/msat+	sero+/msat-
A1	A1	0.93	SB (52)	SB(1), TB(1)	SB(5)
A2	A2	0.86	TB(28), Old (1)	TB(1), SB(1)	QH(1), TB(1), WB(1), P(3), U(1)
A3a	A3	0.93	TB(12), WB(2), P(1)	TB(1)	TB(1), SB(1), AR(1), P(1)
A3b	A3		TB(19), QH(1), P(2), WB(3), U(1)	0	
A3c	A3		TB(9)	0	
A3d	A3		TB(2)	0	
A3e	A3		SB(6)	SB(2)	
A4a	A4	0.92	SB(4)	0	SB(2), U(1)
A4b	A4		SB(8)	0	
A4c	A4		SB(5)	0	
A5a	A5	0.88	TB(3), SB(27)	TB(2), SB(2)	TB(4)
A5b	A5		Old (1)	0	
A6	A6	0.76	SB(14)	SB(1)	TB(2), SB(2), P(1), QH(1), U(2)
A7	A7	0.83	SB(9), TB(1)	SB(1)	P(1), TB(1), SB(1)
A8	A8	0.95	SB(17), MFT (1)	0	APP(1), SB(1)
A9a	A9	0.93	TB(7), WB(1)	U(2)	TB(1)
A9b	A9		TB(3)	0	
A10a	A10	0.86	SB(47)	SB(2)	TB(4), SB(8), U(1)
A10b	A10		SB(14), TB(2)	0	
A10c	A10		SB(7)	U(1)	
A10d	A10		SB(7)	SB(3)	
A15	A15	0.75	TB(4)	TB(1), SB, (1), U(1)	0
A19	A19	0.75	TB(6), U(2)	0	TB(4), P(1), U(1)
COR <sup>d</sup>				TB(11), SB(9), AR(7), QH(2), APP(2), P(13), WB(1), U(2)	
Blank <sup>e</sup>				TB(7), SB(6), QH(3), AR(1), WB(1), MFT(1), P(10), U(7)	

<sup>a</sup> Data collected from 218 horses (2n=436 chromosomes) with 353 “ELA-A“ haplotypes, 47 COR haplotypes, and 36 blank haplotypes.

<sup>b</sup> Correlation coefficient (*r*) was analyzed for each haplotype. For sub-haplotypes, *r* values were calculated individually and the combined statistics are reported here. For detailed data and calculations, see **Figure S3**.

<sup>c</sup> Breeds: APP= Appaloosa; AR= Arabian; Han= Hanoverian; MFT= Missouri Fox Trotter; Old= Oldenburg; P= unknown breed pony, presumably mixed breed; QH= Quarter horse; SB= Standardbred; TB= Thoroughbred; WB= warmblood; U= breed of horse unknown, presumably mixed breed.

<sup>d</sup> This row is the summary all of COR haplotypes (listed in **Table 1**) that were identified in this subset of horses.

<sup>e</sup> This row represents the number horses which were serotyped and had allele combinations which did not meet haplotype definition.