

CYTB haplotypes	GenBank accession numbers	Qi, A. Et al., 2012* (PopSet: 426260659)	Ning, T. et al., 2009 <sup>a</sup> (PopSet: 262348272)	Ning, T. et al., 2008 <sup>a</sup> (PopSet: 183181282)	Achilli, A., et al., 2013 <sup>b**</sup> (PopSet: 374725290)	Peng et al., 2015 <sup>c</sup> (DomeTree)
Ht1CYTB	KT792934	A1, A2, B1	101, 100, 98, 95, 94, 76, 70, 67, 59	hap30	A, B, C, D	H
Ht2CYTB	KT792935	M1, M2, M4, M5, M6, N2, N3, N4	80, 79, 57	hap13, hap12	N, M	M-N
Ht3CYTB	KT792936	-	93, 65	-	B	B1a2
Ht4CYTB	KT792937	-	-	-	-	-
Ht5CYTB	KT792938	-	-	-	-	H
Ht6CYTB	KT792939	L9, L8, L6, L5, L4, L36, L35, L32, L31, L30, L3, L27, L23, L21, L19, L18, L17, L16, L15, L14, L13, L12, L10, L1	89	hap17	L	A1b
Ht7CYTB	KT792940	H1	-	hap43, hap44	H	H
Ht8CYTB	KT792941	-	-	-	-	M-N
Ht9CYTB	KT792942	L29	-	-	-	A-Q
Ht10CYTB	KT792943	-	48, 50, 97	-	K, J	JK
Ht11CYTB	KT792944	-	-	-	-	G1a
Ht12CYTB	KT792945	-	-	-	J	J2
Ht13CYTB	KT792946	-	92	hap37, hap38	R	A-Q
Ht14CYTB	KT792947	-	-	-	-	M-N
Ht15CYTB	KT792948	-	-	-	G	G1a
Ht16CYTB	KT792949	-	-	-	-	G1b
Ht17CYTB	KT792950	-	58	hap24, hap35, hap36	Q,P	M-Q
Ht18CYTB	KT792951	I9, I7, I6, I5, I4, I3, I16, I15, I14, I13, I12, I11, I10	53	-	I	H
Ht19CYTB	KT792952	-	-	hap31	O	M-Q
Ht20CYTB	KT792953	-	-	-	-	J2
Ht21CYTB	KT792954	-	-	-	-	M-Q
Ht22CYTB	KT792955	G8, G7, G6, G5, G4, G3, G2, G1	-	hap24, hap35, hap36	G, F	G3
Ht23CYTB	KT792956	-	-	-	-	D
Ht24CYTB	KT792957	-	-	hap18	L	L1b

**Table S3:** The nominations of the detected *CYTB* haplotypes in different horse studies. (\*Unpublished data; \*\*Haplotypes were clustered into haplogroups)

#### References:

<sup>a</sup>Ning T, Li J, Lin K, Xiao H, Wylie S, Hua S, Li H, and Zhang Y-P. 2014. Complex Evolutionary Patterns Revealed by Mitochondrial Genomes of the Domestic Horse. *Current molecular medicine* 14:1286-1298.

<sup>b</sup>Achilli A, Olivieri A, Soares P, Lancioni H, Kashani BH, Perego UA, Nergadze SG, Carossa V, Santagostino M, and Capomaccio S. 2012. Mitochondrial genomes from modern horses reveal the major haplogroups that underwent domestication. *Proceedings of the National Academy of Sciences* 109:2449-2454.

<sup>c</sup>Peng MS, Fan L, Shi NN, Ning T, Yao YG, Murphy RW, Wang WZ, and Zhang YP. 2015. DomeTree: a canonical toolkit for mitochondrial DNA analyses in domesticated animals. *Molecular ecology resources*.