

**Supplementary Table S3.** Hardy Weinberg (HW) equilibrium test in all studied microsatellite loci by Arabian horse lineages.

Locus	Lineage								
	SAK I	LAT	SEA	IBR	SHA	DJE	KUH	BAI	SAR
AHT4	0.408	0.024*	0.240	0.484	0.263	0.992	0.364	0.735	0.893
ASB2	0.432	0.992	1.000	0.777	0.367	0.299	0.997	0.010**	0.907
HMS2	0.660	0.806	0.931	0.509	0.377	0.996	0.378	0.904	0.463
HMS7	0.013*	0.003**	0.815	0.004***	0.415	0.264	0.747	0.951	0.559
HTG6	0.531	0.506	0.852	0.754	0.136	0.678	0.002***	0.823	0.162
AHT5	0.200	0.496	0.472	0.899	0.068	0.788	0.648	0.975	0.577
HMS3	0.036*	0.834	0.511	0.058	0.404	0.834	0.101	0.332	0.605
HTG10	0.658	0.016*	0.232	0.907	0.403	0.022*	0.767	0.778	0.621
HTG7	0.477	0.128	0.967	0.055	0.014*	0.684	0.534	0.393	0.523
HMS1	0.856	0.610	0.982	0.018*	0.107	0.616	0.831	0.627	0.604
HMS6	0.588	0.719	0.841	0.995	0.005***	0.621	1.000	0.813	0.441
HTG4	0.012*	0.906	0.815	0.280	0.294	0.734	0.329	0.535	0.475
VHL20	0.070	0.775	0.701	0.083	0.722	0.883	0.208	0.623	0.478

Significant at  $p < 0.005^*$ ,  $p < 0.01^{**}$ ,  $p < 0.001^{***}$ . Arabian horse lineages abbreviations could be seen in Table 1.