

## *Supplementary Material*

### 1 Supplementary Tables

**Table S1** Bank vole samples with their HBB genotypes, population assignment and geographic origin

Sample No.	HBB-T1 genotype	HBB-T2 genotype	Mitochondrial DNA clade	Origin
1363	Cys52Cys	Cys52Cys	Carpathian	Germany
1470	Cys52Cys	Ser52Ser	Western	Netherlands
1472	Cys52Cys	Ser52Ser	Western	Netherlands
1477	Cys52Cys	Ser52Ser	Western	Netherlands
1479	Cys52Cys	Ser52Ser	Western	Netherlands
1491	Cys52Cys	Cys52Cys	Western	Netherlands
1495	Cys52Cys	Cys52Cys	Western	Netherlands
1514	Cys52Cys	Cys52Cys	Western	Netherlands
1550	Cys52Cys	Ser52Ser	Western	England
1551	Cys52Cys	Ser52Ser	Western	England
1554	Cys52Cys	Ser52Ser	Western	England
1555	Cys52Cys	Ser52Ser	Western	England
1584	Ser52Ser	Ser52Ser	Carpathian	Scotland
1585	Ser52Ser	Ser52Ser	Carpathian	Scotland
1587	Ser52Ser	Ser52Ser	Carpathian	Scotland
1588	Ser52Ser	Ser52Ser	Carpathian	Scotland
1622	Cys52Cys	Cys52Cys	Western	England
1634	Ser52Ser	Ser52Ser	Carpathian	England
1635	Cys52Cys	Ser52Ser	Carpathian	England
1638	Cys52Cys	Ser52Ser	Carpathian	England
1700	Cys52Cys	Ser52Ser	Carpathian	Sweden
1702	Cys52Cys	Ser52Ser	Carpathian	Sweden
1703	Cys52Cys	Ser52Ser	Carpathian	Sweden
1704	Cys52Cys	Ser52Ser	Carpathian	Sweden
1752	Ser52Ser	Ser52Ser	Eastern	Denmark
1753	Ser52Ser	Ser52Ser	Eastern	Denmark
1757	Ser52Ser	Ser52Ser	Eastern	Denmark
1758	Ser52Ser	Ser52Ser	Eastern	Denmark
1760	Ser52Ser	Ser52Ser	Eastern	Denmark
1786	Cys52Cys	Cys52Cys	Carpathian	England
1788	Cys52Cys	Cys52Cys	Western	England

Sample No.	HBB-T1 genotype	HBB-T2 genotype	Mitochondrial DNA clade	Origin
1798	Cys52Cys	Ser52Ser	Carpathian	England
1801	Cys52Cys	Ser52Ser	Carpathian	England
1802	Cys52Cys	Ser52Ser	Carpathian	England
1816	Cys52Cys	Cys52Cys	Western	England
1819	Cys52Cys	Ser52Ser	Western	England
1825	Cys52Cys	Cys52Cys	Western	England
1827	Ser52Ser	Ser52Ser	Calabrian	Italy
1829	Ser52Ser	Ser52Ser	Calabrian	Italy
1830	Ser52Ser	Ser52Ser	Calabrian	Italy
1831	Ser52Ser	Ser52Ser	Calabrian	Italy
1832	Ser52Ser	Ser52Ser	Calabrian	Italy
1849	Ser52Ser	Ser52Ser	Carpathian	Norway
1850	Ser52Ser	Ser52Ser	Carpathian	Norway
1851	Ser52Ser	Ser52Ser	Carpathian	Norway
1852	Ser52Ser	Ser52Ser	Carpathian	Norway
1853	Ser52Ser	Ser52Ser	Carpathian	Norway

**Table S2** Primers used for reverse-transcription quantitative real-time PCR

Gene	Sequence (5'- 3')	Direction	Annealing temp. (°C)	Amplicon size (bp)
<i>HBB-T1</i>	ACAGGCAAGTGCAGGAAAG	R	57	175
<i>HBB-T2</i>	GTGCATAAACACGAGCAAGAA	R	57	179
<i>HBB-T1</i> and <i>HBB-T2</i>	ACGTGGATCCTGAGAACTT	F	57	
<i>Actb</i>	CTTCTACAACGAGCTGCG	F	57	155
<i>Actb</i>	CCGGAGTCCATCACAAT	R	57	
<i>Gapdh</i>	CTTCCTGCACCACCAACTGCT	F	57	187
<i>Gapdh</i>	CGCCAGTGGATGCAGGGATGA	R	57	
<i>Ppia</i>	GGTGACTTCACACGCCATA	F	57	237
<i>Ppia</i>	CTCCATGGCTTCCACAATG	R	57	
<i>Rn18s</i>	GCTCGCTCCTCTCCTACTTG	F	57	235
<i>Rn18s</i>	AGGGCAGACGTTTCAATG	R	57	
<i>Rpl0</i>	AACATGCTGAACATCTC	F	58	153
<i>Rpl0</i>	ACAAACACTGGCAACATTC	R	58	
<i>Tbp</i>	GGTGACTTCACACGCCATA	F	58	250
<i>Tbp</i>	CTCCATGGCTTCCACAATG	R	58	
<i>Ube2d2</i>	GTCCTGTTGGAGATGATATG	F	58	212
<i>Ube2d2</i>	AGACCACTGTGATCGTAGAA	R	58	