Table S1 Sampling information of different populations of striped hamster

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Pop | Sites | Longitude | Latitude | Elevation(m) | Samples |
| N1 | New Barag Right Banner, Hulun Buir | 116.85ºE | 48.81ºN | 552 | 3 |
| N2 | East Ujimqin Banner, Xilin Gol | 116.59ºE | 45.60ºN | 916 | 17 |
| N3 | Qog UI, Xilin Gol | 115.92ºE | 44.18ºN | 947 | 24 |
| N4 | Baiyin Siler, Xilin Gol | 116.78ºE | 44.08ºN | 1215 | 1 |
| W2 | Abag Banner, Xilin Gol | 114.97ºE | 44.03ºN | 1144 | 62 |
| W4 | West Ujimqin Banner, Xilin Gol | 116.73ºE | 44.59ºN | 968 | 111 |
| W5 | Horqin Left Middle Banner, Tongliao | 121.55ºE | 44.27ºN | 203 | 4 |

Table S2 Characteristics of 7 microsatellite loci of striped hamster

|  |  |  |  |
| --- | --- | --- | --- |
| Loci | Primer Sequence (5’→3’) | Allele Size (bp) | Genbank ID |
| CHM93 | F: TCTGTGTGTCTGTGAATGCG | 276 | FJ426316 |
| R: GGATGTAAGATGGCTCCGAA |
| CHM108 | F: CAATGGCTGCTAAGAGAGGG | 276 | FJ426318 |
| R: GTTCTTTCCCACTCACAATTTTCCTTC |
| CHM120 | F: GATAGGAGGGAGCAAAAGGG | 242 | FJ426320 |
| R: CCTGAGAGCCTCAGAGCAGT |
| CHM124 | F: CAGATGCCCAAACTCTCTCC | 284 | FJ426321 |
| R: GTTCTTGTCACCCCATGGACTACA |
| CHM140 | F: GCAGCTGGTTTTGAGCTACC | 250 | FJ426323 |
| R: GTTCTTTGTTTGATCACTGGAACCCA |
| CHM147 | F: CATCTGGGCTTTCAATGGAT | 241 | FJ426324 |
| R: GCTCCCTAAATAACCCCCAA |
| SSR29 | F: CAGGGAAATGATGATACC | 357 | EF530613 |
| R: TCAGCAGCACTCAGAAGG |

Table S3 Results from maximum likelihood codon-based models of selection using EastyCodeml.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Model | np | Ln L | Parameter estimates | Model compared | LRT P-value |
| M3 | 164 | -2014 | p0 = 0.583, p1 = 0.274, p2 = 0.143,ω0 = 0.063, ω1 = 0.794, ω2= 2.145 | M0 vs. M3 | P < 0.0001 |
| M0 | 160 | -2164 | ω0 = 0.436 |
| M2a | 163 | -2014 | p0 = 0.596, p1 = 0.328, p2 = 0.077,ω0 = 0.069 , ω1 = 1 , ω2 = 3.081 | M1a vs. M2a | P < 0.0001 |
| M1a | 161 | -2027 | p0 = 0.613, p1 = 0.387,ω0 = 0.062 , ω1 = 1 |
| M8 | 163 | -2012 | p0 = 0.87, p1 = 0.130, p = 0.214,q = 0.441, ω = 2.215 | M7 vs. M8 | P < 0.0001 |
| M7 | 161 | -2023 | p = 0.064, q = 0.080 |
| M8a | 162 | -2020 | p0 = 0.732, p1 = 0.268 p = 0.390,q = 2.177, ω = 1 | M8a vs. M8 | P < 0.0001 |

Abbreviation: ω = selection parameter; pn = proportion of sites that fall into theωn site class; p, q = shape parameters of theβfunction (for models M7 and M8).