

**Table S3. Estimates of the dBGC intensity  $G$  on HM motifs in the human branch.**

| Ncat <sup>a</sup> | G <sup>b</sup> | lnL0 <sup>c</sup> | lnL1 <sup>c</sup> | lnLmax <sup>d</sup> | p-value <sup>e</sup> | Gof <sup>f</sup> |
|-------------------|----------------|-------------------|-------------------|---------------------|----------------------|------------------|
| 6                 | 9.30           | -43.20            | -28.82            | -27.91              | 8.23E-08             | 0.87             |
| 7                 | 7.61           | -46.54            | -34.26            | -31.69              | 7.14E-07             | 0.53             |
| 10                | 9.55           | -60.29            | -46.67            | -41.47              | 1.79E-07             | 0.32             |
| 12                | 8.55           | -67.37            | -54.17            | -47.35              | 2.75E-07             | 0.25             |
| 15                | 6.93           | -69.64            | -59.81            | -55.25              | 9.27E-06             | 0.82             |
| 22                | 8.55           | -96.06            | -82.57            | -72.01              | 2.06E-07             | 0.45             |
| 42                | 8.26           | -137.38           | -124.23           | -100.97             | 2.91E-07             | 0.26             |

<sup>a</sup> number of DAF categories

<sup>b</sup> Population scaled BGC coefficient ( $G = 4N_e g$ )

<sup>c</sup> Log-likelihood of neutral model (L0) and BGC model (L1)

<sup>d</sup> see methods

<sup>e</sup> p-value of LRT test comparing M0 and M1

<sup>f</sup> Goodness of fit (see methods)