

**Table S6.** Estimated parameters of a DFE model with three discrete mutation fitness effect bins ( $s=0$ ,  $s=s_2$  and  $s=1$ ) with proportions ( $p_1$ ,  $p_2$  and  $p_3$ ), the average fitness effect (weighted average of 0,  $s_2$  and 1), the change in log likelihood from a gamma model of the DFE ( $\Delta\log L = \log L_{discrete} - \log L_{gamma}$ ), the mean fixation probability ( $u_n$ ) and estimates of  $\alpha$  and  $\omega_a$ . Estimates are obtained for non-CpG-prone sites only using rat as an outgroup.

<b>Site Class</b>	<b><math>N_e s_2</math></b>	<b><math>p_1</math></b>	<b><math>p_2</math></b>	<b><math>p_3</math></b>	<b>Mean <math>N_e s</math></b>	<b><math>\Delta\log L</math></b>	<b><math>u_n</math></b>	<b><math>\alpha</math> (rat)</b>	<b><math>\omega_a</math> (rat)</b>
Zero-fold	7.63	0.189	0.0276	0.786	143	18.7	0.187	0.224	0.053
Two-fold (nonsyn.)	27.7	0.209	0.0	0.791	144	-6.42	0.209	0.353	0.114
UTRs	2.47	0.72	0.0	0.282	51	-4.82	0.718	0.106	0.0851
CNEs	7.20	0.46	0.287	0.249	48.6	57.9	0.464	0.0677	0.0336