

**Table S3. Parameter estimates for PAML models.**

| <b>Group</b>       | <b>Model</b>              | <b>Parameter estimates</b>                                       | <b>Sites* with <math>\omega &gt; 1</math>, <math>\omega</math> (SE)</b> |
|--------------------|---------------------------|--|---|
| II 2005-2006       | M7 ( $\beta$ )            | $p = 0.19, q = 0.64$   |   |
|                    | M8 ( $\beta$ & $\omega$ ) | $p = 0.63, q = 2.96, f_0 = 0.97$<br>$\omega = 2.56, f_1 = 0.03$  | 145, 1.379 (0.763)  |
|                    |                           |  | 154, 1.34 (0.765)   |
|                    |                           |  | <b>156</b> , 1.748 (0.571)  |
|                    |                           |  | 157, 1.313 (0.765)  |
|                    |                           |  | 171, 1.409 (0.714)  |
|                    |                           |  | <b>172</b> , 1.749 (0.571)  |
|                    |                           |  | 178, 1.653 (0.636)  |
|                    |                           |  | 204, 1.429 (0.712)  |
|                    |                           |  | 205, 1.517 (0.702)  |
| II 2006-2007       | M7 ( $\beta$ )            | $p = 0.16, q = 0.60$   |   |
|                    | M8 ( $\beta$ & $\omega$ ) | $p = 1.81, q = 13.43, f_0 = 0.93$<br>$\omega = 1.61, f_1 = 0.07$ | 61, 1.229 (0.634)   |
|                    |                           |  | 136, 1.506 (0.584)  |
|                    |                           |  | 145, 1.288 (0.687)  |
|                    |                           |  | 154, 1.252 (0.688)  |
|                    |                           |  | <b>156*</b> , 1.701 (0.454)   |
|                    |                           |  | 157, 1.211 (0.688)  |
|                    |                           |  | 170, 1.507 (0.585)  |
|                    |                           |  | 171, 1.496 (0.588)  |
|                    |                           |  | 172, 1.632 (0.516)  |
| 178, 1.504 (0.585) |                           |  |   |
| 199, 1.202 (0.63)  |                           |  |   |
| 200, 1.358 (0.637) |                           |  |   |
| 204, 1.268 (0.637) |                           |  |   |
| 205, 1.371 (0.636) |                           |  |   |

$p$  and  $q$  are parameters of the  $\beta$  distribution.  $f$  is the proportion of sites assigned to an individual  $\omega$  (= dN/dS) category or to a  $\beta$  distribution with shape parameters  $p$  and  $q$ ,  $f_1 = 1 - f_0$ . Sites inferred under selection at the 90% level are listed in bold, and those at the 95% level are marked with an asterisk.