

Table S1. Partition scheme of the pep sequences of 99 single-copy orthologues used in this study.

Subset	Best model	Partition scheme
1	JTT+G	OG0010449, OG0010345
2	LG4M+G	OG0010460, OG0010353
3	LG+G+F	OG0010593, OG0010357
4	LG+G	OG0010545, OG0010369
5	LG4X	OG0010646, OG0010652, OG0010571, OG0010372, OG0010691, OG0010752, OG0010480, OG0010577, OG0010424
6	JTT+G	OG0010387, OG0010497
7	LG4X	OG0010648, OG0010689, OG0010521, OG0010400, OG0010748, OG0010491, OG0010656, OG0010392, OG0010790
8	LG+G	OG0010462, OG0010401
9	JTT+G	OG0010695, OG0010544, OG0010435, OG0010410
10	JTT+G	OG0010412
11	JTT+G	OG0010453, OG0010423
12	JTTDCMUT+G	OG0010508, OG0010438, OG0010528
13	LG4M+G	OG0010483, OG0010442, OG0010714
14	JTT+G	OG0010720, OG0010547, OG0010471
15	LG+G	OG0010698, OG0010672, OG0010621, OG0010479
16	LG4X	OG0010694, OG0010715, OG0010601, OG0010487, OG0010776, OG0010770
17	JTTDCMUT+I+G	OG0010490
18	LG4X	OG0010495
19	JTT+G	OG0010702, OG0010498, OG0010573
20	DAYHOFF+G	OG0010501, OG0010687
21	LG4X	OG0010699, OG0010523, OG0010793, OG0010833
22	JTT+G	OG0010583, OG0010768, OG0010532

23	LG+G+F	OG0010534
24	LG4X	OG0010788, OG0010551, OG0010745, OG0010588, OG0010606, OG0010610
25	JTT+I+G	OG0010638, OG0010579, OG0010795, OG0010749
26	JTTDCMUT+I+G	OG0010587
27	LG4M+G	OG0010777, OG0010822, OG0010595
28	LG+G	OG0010634, OG0010706
29	JTT+G	OG0010751, OG0010644, OG0010682
30	JTT+G	OG0010693
31	LG4M+G	OG0010722
32	LG4M+G	OG0010746
33	LG4M+G	OG0010758
34	JTT+G	OG0010779
35	FLU+G	OG0010794
36	LG4X	OG0010801
37	LG4X	OG0010823, OG0010829
