

Table 5. Mitochondrial amino acid sequences (mtREV + Γ model)

Tree topology	$\Delta\ln L(\pm SE)$	PP	BP	AU	KH	WSH
1 (Eul,((Chi,(Per,Car)),Cetart),Out)	-23.8(\pm 8.8)	5e-11	0	7e-07	0.005	0.063
2 (Eul,(Chi,(Cetart,(Per,Car))),Out)	<-44796.2>	0.962	0.395	0.822	0.629	0.992
3 (Eul,(Chi,((Cetart,Per),Car)),Out)	-3.2(\pm 9.4)	0.037	0.232	0.595	0.371	0.925
4 (Eul,((Chi,Cetart),(Per,Car)),Out)	-16.1(\pm 10.7)	1e-07	0.021	0.173	0.065	0.477
5 (Eul,((Chi,Car),(Cetart,Per)),Out)	-20.7(\pm 14.3)	1e-09	0.008	0.069	0.075	0.323
6 (Eul,((Chi,(Cetart,Car)),Per),Out)	-26.7(\pm 14.8)	3e-12	4e-04	0.029	0.036	0.359
7 (Eul,((Chi,(Cetart,Per)),Car),Out)	-24.4(\pm 13.7)	2e-11	2e-04	0.007	0.039	0.123
8 (Eul,(((Chi,Car),Cetart),Per),Out)	-21.8(\pm 15.6)	3e-10	0.025	0.175	0.082	0.537
9 (Eul,(((Chi,Cetart),Per),Car),Out)	-21.8(\pm 14.0)	3e-10	0.011	0.131	0.066	0.477
10 (Eul,((Chi,Per),(Cetart,Car)),Out)	-35.2(\pm 12.6)	5e-16	0	0.003	0.004	0.074
11 (Eul,(((Chi,Cetart),Car),Per),Out)	-20.3(\pm 15.1)	2e-09	0.032	0.216	0.091	0.566
12 (Eul,(((Chi,Car),Per),Cetart),Out)	-30.7(\pm 13.0)	5e-14	0	0.001	0.013	0.161
13 (Eul,(((Chi,Per),Car),Cetart),Out)	-36.4(\pm 12.1)	2e-16	0	4e-04	0.002	0.046
14 (Eul,(((Chi,Per),Cetart),Car),Out)	-32.4(\pm 13.4)	8e-15	0	0.024	0.01	0.11
15 (Eul,(Chi,((Cetart,Car),Per)),Out)	-10.8(\pm 7.1)	2e-05	0.005	0.087	0.073	0.48
53 (Eul,Chi,(Out,(Cetart,(Per,Car))))	-7.2(\pm 11.4)	0.001	0.147	0.467	0.265	0.846
44 (Eul,Chi,(Out,((Cetart,Per),Car)))	-10.3(\pm 14.7)	3e-05	0.085	0.342	0.242	0.833
59 (Eul,Chi,(((Out,Per),Car),Cetart))	-27.8(\pm 20.7)	8e-13	0.029	0.17	0.09	0.556
25 (Eul,Chi,((Out,Per),(Cetart,Car)))	-33.8(\pm 20.7)	2e-15	0.002	0.063	0.052	0.412

Differences in log-likelihood scores of alternative trees from the highest likelihood tree [and their SEs calculated by the Kishino and Hasegawa (1) formula in parentheses] are given. The log-likelihood of the highest likelihood tree is shown in brackets. PP, Bayesian posterior probability; BP, RELL bootstrap probability (2); AU, P values of the approximately unbiased test (3); KH, Kishino and Hasegawa test (1); WSH, weighted Shimodaira and Hasegawa test (4); Eul, Eulipotyphla; Chi, Chiroptera; Car, Carnivora; Cetart, Cetartiodactyla; and Per, Perissodactyla. Tests were done with the CONSEL program (5). Among the 105 possible trees, only 15 are shown, including the Eulipotyphla basal tree and others having $P > 0.05$ (from the AU test).

References

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