

First sequence is:

PAUP*

PROML gamma

* = significantly positive, $P < 0.05$ ** = significantly positive, $P < 0.01$

Goldman dataset	# of sequences	GI	Description	Parsimony score	# of internal nodes	# of zero-length branches (**)	# of zero-length branches (*)	# of zero-length branches
1	8	170111	Ferredoxin-NADP oxidoreductase	641	5	0	0	0
2	8	120283	Flavodoxin	444	5	1	0	1
3	11	15804393	Porphobilinogen deaminase	727	8	0	2	0
4	8	4504669	Interleukin 4	188	5	1	0	0
5	9	124154	Trypsin inhibitor	277	6	0	1	1
6	9	139836	Xylose isomerase	483	6	1	0	0
7	10	3023284	alpha-Amylase	505	7	0	1	2
8	14	26249817	Malate dehydrogenase	840	11	1	0	1
9	13	20141091	Neurotoxin 2 precursor	136	10	4	0	2
10	10	15595715	Cytochrome c-551 precursor	225	7	2	1	1
			Chloramphenicol					
11	13	115686	acetyltransferase III	792	10	1	0	0
12	16	30585005	<i>Homo sapiens</i> interleukin 8	324	13	4	0	0
13	13	118985	Dihydrofolate reductase	248	10	3	1	1
14	11	229728	Chain A, Cytochrome	323	8	0	0	2
			Nitrogenase molybdenum-iron					
15	14	128239	protein alpha chain	1354	11	0	0	4
16	12	209486	Tumor necrosis factor precursor	188	9	2	1	0
17	10	230568	Chain A, Hemerythrin (Met)	280	7	2	0	0
18	15	230780	Chain A, Thymidylate Synthase	1034	12	0	0	1
			Chain A, Dihydrolipoamide					
19	16	23103003	Dehydrogenase	1866	13	2	0	0

20	9	5107783	Cytosolic malate dehydrogenase	468	6	1	0	0
21	11	998767	Keratinase	946	8	0	1	0

PROML no gamma

Degree of edit
disagreement
between

# of zero-length branches (**)	# of zero-length branches (*)	# of zero-length branches	Bayesian & ML approaches
0	0	0	0 None (0 steps)
2	0	0	0 Minor (1-2 steps)
0	1	0	0 None (0 steps)
1	0	0	0 None (0 steps)
0	0	1	1 Major (>2 steps)
1	0	0	0 None (0 steps)
0	1	2	2 Minor (1-2 steps)
0	1	0	0 Major (>2 steps)
4	0	2	2 Minor (1-2 steps)
3	0	2	2 Minor (1-2 steps)
0	0	0	0 Minor (1-2 steps)
4	0	0	0 None (0 steps)
4	0	1	1 None (0 steps)
0	1	0	0 None (0 steps)
0	1	1	1 Major (>2 steps)
2	0	0	0 Major (>2 steps)
0	0	0	0 Minor (1-2 steps)
0	0	1	1 Minor (1-2 steps)
1	0	0	0 Minor (1-2 steps)

1	0	0 Minor (1-2 steps)
0	1	0 Minor (1-2 steps)