Supplementary table 3: Log-likelihood/total tree length/total internal branch length scores of phylogenetic trees with respect to various substitution matrices and alignments of set3.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Alignment | BLOSUM 62 | Dayhoff | JTT | JTT  DCMut | LG | PMB | VT | WAG | DCMut | Minimum | Maximum | Average | Standard Deviation |
| CLUSTAL-Omega | -120572.0  /163.81  /67.1 | -120149.1  /180.51  /74.69 | -118665.7  /173.35  /72.24 | -118685.2  /173.183  /72.196 | -121371.8  /177.52  /73.998 | -120201.3  /162.613  /66.574 | -119386.7  /163.049  /67.293 | -119085.6  /169.882  /70.352 | -120134.3  /180.299  /74.229 | -121371.8  /162.613  /66.574 | -118665.7  /180.510  /74.69 | -119805.7  /171.58  /70.958 | 913.213  /7.186  /3.254 |
| Kalign | -121376.9  /178.446  /73.74 | -119597.0  /182.82  /77.539 | -118156.2  /174.95  /74.963 | -118209.2  /176.268  /74.901 | -120775.6  /181.271  /77.182 | -119879.8  /164.706  /68.751 | -118962.3  /165.346  /69.582 | -118648.8  /172.361  /73.3162 | -119575.2  /182.562  /77.337 | -121376.9  /164.706  /68.751 | -118156.2  /182.82  /77.539 | -119464.5  /175.414  /74.146 | 1105.85  /6.853  /3.219 |
| MAFFT1 | -118421  /153.148  /62.1 | -117766.0  /166.062  /68.662 | -116311.3  /160.046  /66.623 | -116335.7  /160.097  /66.694 | -118831.4  /164.258  /67.607 | -118111.7  /151.9  /62.046 | -117201.8  /152.298  /62.180 | -116858.3/  157.673  /64.348 | -117813.7/  165.838  /68.551 | -118831.4  /151.9  /62.046 | -116311.3  /166.062  /68.662 | -117516.8  /159.035  /65.425 | 896.585  /5.677  /2.787 |
| Kalign1 | -110861.8  /130.808  /52.521 | -109692.9  /138.932  /55.753 | -108600.1  /134.905  /55.109 | -108586.7  /134.697  /54.538 | -110161.0  /136.833  /55.570 | -110791.4  /129.537  /51.488 | -109662.6  /129.367  /51.817 | -108861.1  /133.14  /53.709 | -109688.8  /138.692  /56.314 | -110861.8  /129.537  /51.48 | -108586.7  /138.932  /56.314 | -109656.3  /134.101  /54.091 | 858.103  /3.672  /1.791 |
| MUSCLE1 | -122204.0  /171.17  /73.244 | -121709.1  /188.806  /81.76 | -120287.5  /180.673  /78.378 | -120305.5  /181.099  /78.85 | -122949.8  /186.128  /80.417 | -121862  /169.651  /73.467 | -121035.6  /170.579  /73.605 | -120825.4  /177.425  /76.478 | -121682.6  /188.214  /81.216 | -122949.8  /169.651  /73.244 | -120287.5  /188.806  /81.76 | -121429.1  /179.305  /77.491 | 889.403  /7.585  /3.421 |
| CLUSTAL1 | -120555.5  /163.969  /67.456 | -120131.8  /179.979  /73.405 | -118662.5  /173.05  /72.061 | -118655.3  /173.878  /72.687 | -121346.6  /177.247  /73.819 | -120225.7  /162.195  /67.254 | -119392.7  /163.478  /66.948 | -119128.7  /169.992  /70.48 | -120128.8  /180.618  /75.1 | -121346.6  /162.195  /66.948 | -118655.3  /180.6  /75.1 | -119803.1  /171.601  /71.024 | 907.121  /7.123  /3.12 |
| MAFFT | -118360.3  /155.195  /63.194 | -117694.6  /168.449  /69.645 | -116268.3  /161.844  /67.53 | -116287.4  /162.643  /66.832 | -118733.5  /165.775  /68.54 | -118073.2  /153.464  /62.4 | -117097.8  /154.153  /63.124 | -116721.7  /159.505  /65.67 | -117707.7  /168.38  /69.48 | -118733.5  /153.464  /62.46 | -116268.3  /168.449  /69.645 | -117438.3  /161.045  /66.27 | 893.85  /5.871  /2.805 |
| PROMALS3D | -127711.3  /181.274  /76.23 | -127524.1  /202.405  /84.493 | -125981.4  /192.017  /81.075 | -125996.1  /192.294  /81.293 | -128789.1  /198.378  /83.657 | -127342  /178.924  /75.747 | -126564.7  /180.181  /76.202 | -126523.5  /188.355  /79.735 | -127469  /201.509  /84.51 | -128789.1  /178.924  /75.747 | -125981.4  /202.405  /84.51 | -127100.2  /190.593  /80.327 | 914.485  /9.087  /3.58 |
| Minimum | -127711.3  /130.808  /52.521 | -127524.1  /138.932  /55.753 | -125981.4  /134.905  /55.109 | -125996.1  /134.697  /54.53 | -122949.8  /136.833  /55.57 | -121862  /129.537  /51.48 | -121035.6  /129.367  /51.817 | -126523.5  /133.14  /53.709 | -109688.8  /138.692  /56.314 |  |  |  |  |
| Maximum | -110861.8  /178.446  /73.744 | -109692.9  /202.405  /81.76 | -108600.1  /180.673  /78.378 | -108586.7  /181.099  /81.293 | -110161.0  /198.378  /80.417 | -110791.4  /178.924  /73.467 | -109662.6  /180.181  /73.605 | -108861.1  /177.425  /76.478 | -109688.8  /188.214  /81.216 |  |  |  |  |
| Average | -120007.8  /162.227  /66.951 | -119283.1  /175.996  /73.243 | -117866.6  /168.854  /70.997 | -117882.6  /169.27  /70.992 | -120369.9  /173.426  /72.59 | -119560.9  /159.124  /65.974 | -118663  /159.806  /66.34 | -118331.6  /166.042  /69.262 | -119275  /175.764  /73.34 |  |  |  |  |
| Standard Deviation | 4713.847  /16.17  /7.726 | 4959.347  /18.798  /8.94 | 4838.96  /17.031  /8.089 | 4846.178  /17.23  /8.39 | 5195.16  /18.355  /8.776 | 4598.335  /14.712  /7.549 | 4702.638  /15.122  /7.563 | 4914.754  /16.445  /8.104 | 4942.293  /18.653  /8.737 |  |  |  |  |