**Extended Data Table 1 | Properties of sequence alignments and phylogenetic trees presented in this study.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Protein set** | **Alignment length (unmasked)** | **Alignment length (masked)** | **Evolutionary rate model used** |
| Core proteins (*Chloroflexota* phylum) | NA | 11 613 | LG+F+R6 |
| Type I reaction center (PsaA/PsaB/PscA/PshA) | 1292 | 548 | LG+F+G4 |
| FmoA | 399 | 356 | LG+G4 |
| CbbL | 644 | 412 | LG+I+G4 |
| CsmA | 89 | 74 | LG+F+G4 |
| BchIDH/ChlIDH | 3156 | 1702 | LG+F+I+G4 |
| BchLNB/ChlLNB/BchXYZ | 2010 | 819 | LG+F+I+G4 |