Table S3. Results of Entropy Test for all partitions (gene and position). Iss = Index of substitutional saturation, Iss.cSym = critical value of Iss for a fully symmetric topology, Iss.cAsym = critical value of Iss for a fully asymmetric (ladder-like) topology, *atpbB*1 = *atpB* 1st codon position, *atpB*2 = *atpB* 2nd codon position, etc. Iss.c values underscored and in bold = Iss.c values are statistically significantly less than Iss, indicating that the position may be substitutionally saturated.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| N | Iss | Iss.cSym |  | Iss.cAsym |  |
| *atpB*1 |  |  |  |  |  |
| 4 | 0.13 | 0.788 |  | 0.757 |  |
| 8 | 0.115 | 0.742 |  | 0.631 |  |
| 16 | 0.146 | 0.701 |  | 0.492 |  |
| 32 | 0.136 | 0.69 |  | 0.361 |  |
| *atpB*2 |  |  |  |  |  |
| 4 | 0.067 | 0.788 |  | 0.757 |  |
| 8 | 0.089 | 0.742 |  | 0.631 |  |
| 16 | 0.105 | 0.701 |  | 0.492 |  |
| 32 | 0.119 | 0.69 |  | 0.361 |  |
| *atpB*3 |  |  |  |  |  |
| 4 | 0.585 | 0.788 |  | 0.757 |  |
| 8 | 0.591 | 0.742 |  | 0.631 |  |
| 16 | 0.624 | 0.701 |  | ***0.492*** |  |
| 32 | 0.623 | 0.69 |  | ***0.361*** |  |
| *psaA*1 |  |  |  |  |  |
| 4 | 0.187 | 0.796 |  | 0.762 |  |
| 8 | 0.18 | 0.752 |  | 0.64 |  |
| 16 | 0.234 | 0.721 |  | 0.512 |  |
| 32 | 0.259 | 0.703 |  | 0.378 |  |
| *psaA*2 |  |  |  |  |  |
| 4 | 0.169 | 0.796 |  | 0.762 |  |
| 8 | 0.175 | 0.752 |  | 0.64 |  |
| 16 | 0.218 | 0.721 |  | 0.512 |  |
| 32 | 0.234 | 0.703 |  | 0.378 |  |
| *psaA*3 |  |  |  |  |  |
| 4 | 0.595 | 0.796 |  | 0.762 |  |
| 8 | 0.608 | 0.752 |  | 0.64 |  |
| 16 | 0.664 | 0.721 |  | ***0.512*** |  |
| 32 | 0.675 | 0.703 |  | ***0.378*** |  |
| *psaB*1 |  |  |  |  |  |
| 4 | 0.137 | 0.804 |  | 0.773 |  |
| 8 | 0.154 | 0.765 |  | 0.655 |  |
| 16 | 0.182 | 0.743 |  | 0.533 |  |
| 32 | 0.206 | 0.717 |  | 0.39 |  |
| *psaB*2 |  |  |  |  |  |
| 4 | 0.112 | 0.804 |  | 0.773 |  |
| 8 | 0.117 | 0.765 |  | 0.655 |  |
| 16 | 0.134 | 0.743 |  | 0.533 |  |
| 32 | 0.139 | 0.717 |  | 0.39 |  |
| *psaB*3 |  |  |  |  |  |
| 4 | 0.578 | 0.804 |  | 0.773 |  |
| 8 | 0.597 | 0.765 |  | 0.655 |  |
| 16 | 0.593 | 0.743 |  | ***0.533*** |  |
| 32 | 0.63 | 0.717 |  | ***0.39*** |  |
| *psbA*1 |  |  |  |  |  |
| 4 | 0.057 | 0.78 |  | 0.756 |  |
| 8 | 0.058 | 0.733 |  | 0.626 |  |
| 16 | 0.066 | 0.673 |  | 0.469 |  |
| 32 | 0.063 | 0.682 |  | 0.354 |  |
| *psbA*2 |  |  |  |  |  |
| 4 | 0.052 | 0.78 |  | 0.756 |  |
| 8 | 0.045 | 0.733 |  | 0.626 |  |
| 16 | 0.051 | 0.673 |  | 0.469 |  |
| 32 | 0.049 | 0.682 |  | 0.354 |  |
| *psbA*3 |  |  |  |  |  |
| 4 | 0.267 | 0.78 |  | 0.756 |  |
| 8 | 0.264 | 0.733 |  | 0.626 |  |
| 16 | 0.276 | 0.673 |  | 0.469 |  |
| 32 | 0.281 | 0.682 |  | 0.354 |  |
| *psbC*1 |  |  |  |  |  |
| 4 | 0.116 | 0.785 |  | 0.756 |  |
| 8 | 0.135 | 0.738 |  | 0.628 |  |
| 16 | 0.135 | 0.692 |  | 0.483 |  |
| 32 | 0.145 | 0.686 |  | 0.357 |  |
| *psbC*2 |  |  |  |  |  |
| 4 | 0.09 | 0.785 |  | 0.756 |  |
| 8 | 0.091 | 0.738 |  | 0.628 |  |
| 16 | 0.095 | 0.692 |  | 0.483 |  |
| 32 | 0.113 | 0.686 |  | 0.357 |  |
| *psbC*3 |  |  |  |  |  |
| 4 | 0.549 | 0.785 |  | 0.756 |  |
| 8 | 0.559 | 0.738 |  | 0.628 |  |
| 16 | 0.572 | 0.691 |  | ***0.483*** |  |
| 32 | 0.576 | 0.686 |  | ***0.356*** |  |
| *rcbL*1 |  |  |  |  |  |
| 4 | 0.135 | 0.792 |  | 0.759 |  |
| 8 | 0.151 | 0.747 |  | 0.635 |  |
| 16 | 0.143 | 0.712 |  | 0.503 |  |
| 32 | 0.16 | 0.697 |  | 0.37 |  |
| *rbcL*2 |  |  |  |  |  |
| 4 | 0.079 | 0.792 |  | 0.759 |  |
| 8 | 0.106 | 0.747 |  | 0.635 |  |
| 16 | 0.1 | 0.712 |  | 0.503 |  |
| 32 | 0.113 | 0.697 |  | 0.37 |  |
| *rbcL*3 |  |  |  |  |  |
| 4 | 0.417 | 0.792 |  | 0.759 |  |
| 8 | 0.439 | 0.747 |  | 0.635 |  |
| 16 | 0.427 | 0.712 |  | 0.502 |  |
| 32 | 0.45 | 0.697 |  | ***0.37*** |  |
| SSUpaired |  |  |  |  |  |
| 4 | 0.148 | 0.809 |  | 0.777 |  |
| 8 | 0.162 | 0.771 |  | 0.662 |  |
| 16 | 0.189 | 0.751 |  | 0.543 |  |
| 32 | 0.211 | 0.725 |  | 0.402 |  |
| SSUunpaired | |  |  |  |  |
| 4 | 0.157 | 0.809 |  | 0.778 |  |
| 8 | 0.183 | 0.771 |  | 0.662 |  |
| 16 | 0.204 | 0.751 |  | 0.544 |  |
| 32 | 0.215 | 0.725 |  | 0.402 |  |