**Supplemental Material.**

**Supplemental Table 1 a:**

|  |  |  |
| --- | --- | --- |
| Model | df | AIC |
| ENC`ribo | 3 | -104.55531 |
| deltaENC | 3 | -119.64409 |
| Non-synonymous AT-skew | 3 | -113.61949 |
| ENC` | 3 | -81.09837 |
| Genome size (bp) | 3 | -91.71022 |
| Ribosomal protein GC content (%) | 3 | -87.20576 |
| Genome GC content (%) | 3 | -84.24045 |
| Non-synonymous AT-skew X deltaENC | 4 | -142.59544 |
| deltaENC X Ribiosomal Protein GC | 4 | -122.94479 |
| deltaENC X Genome size | 4 | -130.15463 |
| ENC`ribo X Genome size (bp) x Ribosomal protein GC | 5 | -170.21837 |
| deltaENC X Genome size (bp) x Ribosomal protein GC | 5 | -132.30391 |
| deltaENC X Ribiosomal Protein GC X Non-synonymous AT-skew | 5 | -133.69058 |
| deltaENC X Genome size X Non-synonymous AT-skew | 5 | -144.64803 |
| ENC`ribo X Genome size (bp) x Ribosomal protein GC X Non-synonymous AT-skew | 6 | -174.90644 |

**Supplemental Table 1 b:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Coefficients: |  |  |  |  |  |
|  | Estimate | Std. Error | t value | p-value |  |
| (Intercept) | 4.23E+00 | 3.87E-01 | 10.907 | < 2e-16 | \*\*\* |
| ENC`ribo | -4.90E-02 | 4.93E-03 | -9.932 | < 2e-16 | \*\*\* |
| Genome size (bp) | -3.21E-08 | 6.43E-09 | -4.984 | 1.74E-06 | \*\*\* |
| Ribosomal Protein GC (%) | -2.61E+00 | 3.41E-01 | -7.653 | 2.45E-12 | \*\*\* |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1 | | | |  |  |
| Residual standard error: 0.1345 on 146 degrees of freedom | | | |  |  |
| Multiple R-squared: 0.4631, | Adjusted R-squared: 0.4521 | | |  |  |
| F-statistic: 41.98 on 3 and 146 DF, p-value: < 2.2e-16 | | |  |  |  |

**Supplemental Table 1 c:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Coefficients: |  |  |  |  |  |
|  | Estimate | Std. Error | t value | p-value |  |
| (Intercept) | 3.52E+00 | 5.17E-01 | 6.82 | 2.42E-10 | \*\*\* |
| Non-synonymous AT skew | 1.00E+00 | 4.44E-01 | 2.25 | 0.026 | \* |
| ENC`ribo | -4.48E-02 | 5.51E-03 | -8.131 | 1.91E-13 | \*\*\* |
| Genome Size (bp) | -3.05E-08 | 6.27E-09 | -4.866 | 2.99E-06 | \*\*\* |
| Ribosomal Protein GC content (%) | -1.92E+00 | 4.54E-01 | -4.217 | 4.39E-05 | \*\*\* |
|  |  |  |  |  |  |
| Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1 | | |  |  |  |
| Residual standard error: 0.1304 on 142 degrees of freedom | | |  |  |  |
| Multiple R-squared: 0.5036, | Adjusted R-squared: 0.4896 | | |  |  |
| F-statistic: 36.01 on 4 and 142 DF, p-value: < 2.2e-16 | | |  |  |  |