**Supplementary Table 2. Correlation analysis (Spearman’s rank correlation) of the base compositional features and codon usage indices of EBOV**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 　 | U | C | A | G | U3s | C3s | A3s | G3s | AU | GC | GC12 | GC3 | ENC | Axis1 (RSCU) |
| C | -.295\*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A | .064 | -.360\*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| G | -.060 | .402\*\* | -.875\*\* |  |  |  |  |  |  |  |  |  |  |  |
| U3s | .616\*\* | -.368\*\* | .344\*\* | -.401\*\* |  |  |  |  |  |  |  |  |  |  |
| C3s | -.611\*\* | .531\*\* | -.277\*\* | .305\*\* | -.770\*\* |  |  |  |  |  |  |  |  |  |
| A3s | -.006 | -.318\*\* | .578\*\* | -.570\*\* | .109 | -.263\*\* |  |  |  |  |  |  |  |  |
| G3s | .051 | .160\*\* | -.587\*\* | .598\*\* | -.127\* | .063 | -.718\*\* |  |  |  |  |  |  |  |
| AU | .336\*\* | -.449\*\* | .562\*\* | -.625\*\* | .483\*\* | -.473\*\* | .604\*\* | -.469\*\* |  |  |  |  |  |  |
| GC | -.336\*\* | .449\*\* | -.562\*\* | .625\*\* | -.483\*\* | .473\*\* | -.604\*\* | .469\*\* | -1.000\*\* |  |  |  |  |  |
| GC12 | .018 | .183\*\* | -.062 | .004 | .133\* | -.092 | -.075 | -.027 | -.166\*\* | .166\*\* |  |  |  |  |
| GC3 | -.443\*\* | .482\*\* | -.535\*\* | .580\*\* | -.697\*\* | .730\*\* | -.574\*\* | .430\*\* | -.636\*\* | .636\*\* | -.056 |  |  |  |
| ENC | -.409\*\* | .324\*\* | -.478\*\* | .569\*\* | -.547\*\* | .535\*\* | -.530\*\* | .427\*\* | -.629\*\* | .629\*\* | -.052 | .681\*\* |  |  |
| Axis1 | -.076 | .260\*\* | -.475\*\* | .512\*\* | -.373\*\* | .335\*\* | -.323\*\* | .326\*\* | -.352\*\* | .352\*\* | -.168\*\* | .436\*\* | .452\*\* |  |
| Axis2 | -.075 | .193\*\* | .248\*\* | -.223\*\* | .039 | -.039 | .103 | -.132\* | .104 | -.104 | .080 | -.044 | -.089 | -.215\*\* |

\*\* Correlation is significant at the 1% level of significance; \* Correlation is significant at the 5% level of significance.