

| AA | Codon | Cognates | Pseudo-cognates | Near-cognates | R _c | R _n | ε _M | ε _N |
|----|-------|----------|-----------------|-----------------------------------|----------------|----------------|----------------|----------------|
| N | AAC | GUU | | GCU, GAU, GUA, GGU, GUC, UUU, GUG | 28.650 | 7.91E-02 | 2.75E-03 | 1.09E-04 |
| N | AAU | GUU | | UUU | 18.336 | 2.46E-02 | 1.34E-03 | 1.71E-04 |
| P | CCA | UGG | CGG, GGG | UAG, UGC, UGA, UGU, UUG | 7.171 | 3.34E-02 | 4.63E-03 | 4.36E-04 |
| P | CCC | GGG, UGG | CGG | GAG, GGC, GGU, GGA, GUG | 11.464 | 3.37E-02 | 2.93E-03 | 2.74E-04 |
| P | CCG | CGG, UGG | GGG | CGA, CAG, CCG, CUG, CGU | 11.751 | 4.24E-02 | 3.60E-03 | 2.67E-04 |
| P | CCU | GGG, UGG | CGG | ACG | 8.886 | 1.64E-02 | 1.84E-03 | 3.53E-04 |
| Q | CAA | UUG | CUG | UAG, UGG, UUU, GUG, UUC | 14.334 | 5.34E-02 | 3.71E-03 | 2.19E-04 |
| Q | CAG | CUG, UUG | | CGG, CAG, GUG, CCG | 23.493 | 2.90E-02 | 1.23E-03 | 1.34E-04 |
| R | AGA | UCU | CCU | UCC, GCU, UGU, UUU | 7.167 | 3.89E-02 | 5.39E-03 | 4.36E-04 |
| R | AGG | CCU, UCU | CCG | GCU, CAU, CC, CCA, CGU | 11.751 | 5.36E-02 | 4.54E-03 | 2.66E-04 |
| R | CGA | ACG | UCU, CCG | UAG, UCC, UUG, UGG | 17.199 | 2.11E-02 | 1.22E-03 | 1.83E-04 |
| R | CGC | ACG | CCG | GAG, GCU, GCA, GCC, GUG, GGG | 18.340 | 3.75E-02 | 2.04E-03 | 1.71E-04 |
| R | CGG | CCG, ACG | CCU | CGG, CAG, CCC, CCA, CUG | 24.357 | 3.78E-02 | 1.55E-03 | 1.29E-04 |
| R | CGU | ACG | CCG | | 28.655 | 0.00E+00 | 0.00E+00 | 1.10E-04 |
| S | UCA | UGA | CGA, GGA | UGC, UGU, UGG, UAA | 7.175 | 2.52E-02 | 3.50E-03 | 4.37E-04 |
| S | UCC | GGA, UGA | CGA | GGC, GCA, GUA, GGU, GAA, GGG | 18.627 | 4.60E-02 | 2.46E-03 | 1.68E-04 |
| S | UCG | CGA, UGA | GGA | CGG, CCA, CAA, CGU | 11.755 | 2.11E-02 | 1.79E-03 | 2.67E-04 |
| S | UCU | GGA, UGA | CGA | | 13.470 | 0.00E+00 | 0.00E+00 | 2.33E-04 |
| U | ACA | UGU | GGU, CGU | UGC, UGA, UGG, UUU, UCU | 7.180 | 5.01E-02 | 6.93E-03 | 4.35E-04 |
| U | ACC | GGU, UGU | CGU | GGC, GCU, GAU, GUU, GGA, GGG | 18.631 | 5.47E-02 | 2.93E-03 | 1.68E-04 |
| U | ACG | CGU, UGU | GGU | CGA, CGG, CCU, CAU | 18.917 | 4.74E-02 | 2.50E-03 | 1.66E-04 |
| U | ACU | GGU, UGU | CGU | | 13.474 | 0.00E+00 | 0.00E+00 | 2.33E-04 |
| V | GUA | UAC | GAC | UAG, UGC, UCC, UUC, UAA | 35.821 | 4.19E-02 | 1.17E-03 | 8.77E-05 |
| V | GUC | GAC, UAC | | GAG, GGC, GAU, GUC, GCC, GAA | 35.813 | 6.29E-02 | 1.75E-03 | 8.77E-05 |
| V | GUG | UAC | GAC | CAG, CAU, CCC, CAA | 22.929 | 5.97E-02 | 2.60E-03 | 1.37E-04 |
| V | GUU | GAC, UAC | | | 30.656 | 0.00E+00 | 0.00E+00 | 1.03E-04 |
| W | UGG | CCA | | GCA, CGA, CCU, CCG, CCC, CAA | 7.163 | 2.49E-02 | 3.46E-03 | 4.37E-04 |
| Y | UAC | GUA | | GCA, GUU, GUC, GGA, GAA, GUG | 21.488 | 5.39E-02 | 2.50E-03 | 1.46E-04 |
| Y | UAU | GUA | | | 13.752 | 0.00E+00 | 0.00E+00 | 2.29E-04 |
| Z | AGC | GCU | | GCA, GAU, GUU, GGU, GCC, CCU, UCU | 7.163 | 6.79E-02 | 9.38E-03 | 4.35E-04 |
| Z | AGU | GCU | | ACG, CCU, UCU | 4.584 | 2.46E-02 | 5.34E-03 | 6.82E-04 |