Lookup table for identifying a query protein as natural or non-natural on the basis of percentage residues scoring below the thresholds of CS-Score (< 32.15) and CSS-Score (< 15.5).

A supplementary note is provided at the end of the table to elaborate the details.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| %  Residues | % Proteins Scoring Below CS-Score Threshold (Natural) | % Proteins Scoring Below CS-Score Threshold  (Non-Natural) | % Proteins Scoring Below CSS-Score Threshold (Natural) | % Proteins Scoring Below CSS-Score Threshold  (Non-Natural) |
| 0 | 100.00 | 0.00 | 100.00 | 0.00 |
| 1 | 99.99 | 0.00 | 99.97 | 0.00 |
| 2 | 99.98 | 0.00 | 99.97 | 0.00 |
| 3 | 99.98 | 0.00 | 99.97 | 0.00 |
| 4 | 99.96 | 0.00 | 99.95 | 0.00 |
| 5 | 99.94 | 0.00 | 99.94 | 0.00 |
| 6 | 99.94 | 0.00 | 99.93 | 0.00 |
| 7 | 99.93 | 0.00 | 99.91 | 0.00 |
| 8 | 99.90 | 0.00 | 99.89 | 0.00 |
| 9 | 99.86 | 0.00 | 99.87 | 0.00 |
| 10 | 99.83 | 0.00 | 99.82 | 0.00 |
| 11 | 99.81 | 0.00 | 99.77 | 0.00 |
| 12 | 99.76 | 0.00 | 99.73 | 0.00 |
| 13 | 99.71 | 0.00 | 99.67 | 0.00 |
| 14 | 99.63 | 0.00 | 99.60 | 0.00 |
| 15 | 99.55 | 0.00 | 99.51 | 0.00 |
| 16 | 99.48 | 0.00 | 99.39 | 0.00 |
| 17 | 99.37 | 0.00 | 99.27 | 0.00 |
| 18 | 99.25 | 0.00 | 99.12 | 0.00 |
| 19 | 99.13 | 0.00 | 98.92 | 0.00 |
| 20 | 99.02 | 0.00 | 98.71 | 0.00 |
| 21 | 98.84 | 0.01 | 98.41 | 0.00 |
| 22 | 98.67 | 0.01 | 98.16 | 0.00 |
| 23 | 98.46 | 0.01 | 97.81 | 0.00 |
| 24 | 98.22 | 0.02 | 97.41 | 0.00 |
| 25 | 97.97 | 0.03 | 96.96 | 0.00 |
| 26 | 97.65 | 0.05 | 96.36 | 0.00 |
| 27 | 97.31 | 0.06 | 95.67 | 0.00 |
| 28 | 96.93 | 0.09 | 94.92 | 0.01 |
| 29 | 96.45 | 0.13 | 94.01 | 0.01 |
| 30 | 95.90 | 0.18 | 93.12 | 0.01 |
| 31 | 95.14 | 0.25 | 92.01 | 0.02 |
| 32 | 94.30 | 0.32 | 90.84 | 0.03 |
| 33 | 93.33 | 0.41 | 89.53 | 0.05 |
| 34 | 92.31 | 0.57 | 88.19 | 0.06 |
| 35 | 91.19 | 0.72 | 86.65 | 0.09 |
| 36 | 89.87 | 0.94 | 84.98 | 0.14 |
| 37 | 88.29 | 1.16 | 83.01 | 0.20 |
| 38 | 86.52 | 1.54 | 80.93 | 0.33 |
| 39 | 84.62 | 1.97 | 78.75 | 0.48 |
| 40 | 82.71 | 2.49 | 76.29 | 0.66 |
| 41 | 80.13 | 3.15 | 73.45 | 0.87 |
| 42 | 77.42 | 4.06 | 70.62 | 1.19 |
| 43 | 74.34 | 5.08 | 67.53 | 1.62 |
| 44 | 71.17 | 6.43 | 64.45 | 2.22 |
| 45 | 67.98 | 8.12 | 61.28 | 2.94 |
| 46 | 64.29 | 10.10 | 57.96 | 3.80 |
| 47 | 60.64 | 12.41 | 54.55 | 4.89 |
| 48 | 56.93 | 15.19 | 51.17 | 6.26 |
| 49 | 53.50 | 18.57 | 47.58 | 7.76 |
| 50 | 50.62 | 22.94 | 44.64 | 10.08 |
| 51 | 46.76 | 26.63 | 40.45 | 11.94 |
| 52 | 43.53 | 31.61 | 36.90 | 14.87 |
| 53 | 40.11 | 37.00 | 33.71 | 18.45 |
| 54 | 36.88 | 42.89 | 30.54 | 22.74 |
| 55 | 33.56 | 49.08 | 27.45 | 27.84 |
| 56 | 30.30 | 55.36 | 24.63 | 33.59 |
| 57 | 27.05 | 61.39 | 22.04 | 40.02 |
| 58 | 24.13 | 67.12 | 19.79 | 46.85 |
| 59 | 21.40 | 72.55 | 17.88 | 53.79 |
| 60 | 19.09 | 77.58 | 16.23 | 61.07 |
| 61 | 16.83 | 81.46 | 14.50 | 67.20 |
| 62 | 14.72 | 85.02 | 13.06 | 73.14 |
| 63 | 12.84 | 88.08 | 11.52 | 78.25 |
| 64 | 11.06 | 90.49 | 10.12 | 82.75 |
| 65 | 9.56 | 92.53 | 8.89 | 86.30 |
| 66 | 8.13 | 94.05 | 7.88 | 89.11 |
| 67 | 6.71 | 95.37 | 6.97 | 91.42 |
| 68 | 5.57 | 96.52 | 6.16 | 93.42 |
| 69 | 4.71 | 97.26 | 5.46 | 94.87 |
| 70 | 3.90 | 97.93 | 4.90 | 96.00 |
| 71 | 3.16 | 98.41 | 4.36 | 96.84 |
| 72 | 2.54 | 98.77 | 3.93 | 97.48 |
| 73 | 1.91 | 99.06 | 3.51 | 98.00 |
| 74 | 1.52 | 99.25 | 3.18 | 98.43 |
| 75 | 1.24 | 99.45 | 2.90 | 98.85 |
| 76 | 0.99 | 99.56 | 2.61 | 99.08 |
| 77 | 0.76 | 99.64 | 2.42 | 99.31 |
| 78 | 0.57 | 99.73 | 2.21 | 99.46 |
| 79 | 0.45 | 99.79 | 2.03 | 99.58 |
| 80 | 0.38 | 99.86 | 1.87 | 99.70 |
| 81 | 0.29 | 99.90 | 1.71 | 99.78 |
| 82 | 0.22 | 99.93 | 1.56 | 99.86 |
| 83 | 0.15 | 99.95 | 1.44 | 99.90 |
| 84 | 0.10 | 99.97 | 1.30 | 99.93 |
| 85 | 0.07 | 99.97 | 1.15 | 99.95 |
| 86 | 0.05 | 99.98 | 1.03 | 99.97 |
| 87 | 0.04 | 99.98 | 0.92 | 99.98 |
| 88 | 0.03 | 99.99 | 0.80 | 99.99 |
| 89 | 0.02 | 99.99 | 0.71 | 99.99 |
| 90 | 0.02 | 99.99 | 0.66 | 100.00 |
| 91 | 0.01 | 99.99 | 0.62 | 100.00 |
| 92 | 0.01 | 99.99 | 0.58 | 100.00 |
| 93 | 0.00 | 100.00 | 0.57 | 100.00 |
| 94 | 0.00 | 100.00 | 0.52 | 100.00 |
| 95 | 0.00 | 100.00 | 0.47 | 100.00 |
| 96 | 0.00 | 100.00 | 0.38 | 100.00 |
| 97 | 0.00 | 100.00 | 0.23 | 100.00 |
| 98 | 0.00 | 100.00 | 0.17 | 100.00 |
| 99 | 0.00 | 100.00 | 0.00 | 100.00 |
| 100 | 0.00 | 100.00 | 0.00 | 100.00 |

**Supplementary Note to Table S2.** The first column represents the percentage of residues in a query protein sequence which score below the thresholds of CS- and CSS-Scores. Once the average CS- and CSS-Scores and percentage of residues are known (provided in the program) for the query protein sequence, the exact prediction about the protein as natural or non-natural can be done based on the table above. For instance, if a query sequence has Average CS-Score = 38.32; % Number of Residues below CS-Score Threshold = 35% then the sequence can be predicted as natural protein having scored higher than 91% of the natural proteins (corresponds to row 35, column 2 in Table S2). Likewise, if a query sequence has Average CSS-Score = 12.32; % Number of Residues below CSS-Score Threshold = 63% then the sequence can be predicted as non-natural protein having scored lower than 78% of the non-natural proteins (corresponds to row 63 and column 5 in Table S2).