## Supplementary Information

Table S1. Amino acid compositions in percent as seen over all residues in all chains (column 2), all candidate structural motifs (column 3), and all RSMs (column 4). Column 5 presents the amino acid composition when summed over all RSMs, counting each residue as many times as it is present in RSMs.

| Amino acid | Protein chain | Candidate structural motif | RSM | RSM $_{\Sigma}$ |
| :---: | :---: | :---: | :---: | :---: |
| V | 7.0 | 7.2 | 14.4 | 25.5 |
| I | 5.8 | 6.0 | 10.8 | 15.3 |
| L | 9.6 | 9.8 | 14.4 | 17.5 |
| P | 4.5 | 4.4 | 1.7 | 0.8 |
| Y | 3.6 | 3.8 | 4.4 | 2.9 |
| A | 7.9 | 7.8 | 8.4 | 6.7 |
| W | 1.4 | 1.5 | 1.0 | 0.3 |
| M | 1.7 | 1.7 | 1.0 | 0.3 |
| H | 2.3 | 2.3 | 1.4 | 0.6 |
| K | 5.9 | 5.9 | 4.5 | 3.2 |
| R | 5.1 | 5.2 | 4.4 | 3.0 |
| D | 5.9 | 5.8 | 3.1 | 2.0 |
| E | 6.9 | 6.8 | 4.9 | 3.6 |
| S | 6.1 | 5.9 | 4.5 | 3.0 |
| T | 5.5 | 5.5 | 6.2 | 6.3 |
| N | 4.4 | 4.3 | 1.8 | 0.7 |
| Q | 3.9 | 1.9 | 2.2 | 0.9 |
| C | 1.3 | 6.5 | 1.0 | 0.4 |
| G | 6.8 | 4.4 | 4.6 | 2.9 |
| P | 4.5 |  | 1.7 | 0.8 |

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