Table S8: Frequencies in position two in the test set divided by Viridiplantae (P), Metazoa (M), Fungi (F) and other Eukaryotic organisms (O) sequences for the five categories of proteins, mitochondrial Transit Peptides (mTPs), Signal Peptide (SP), choroplast Transit Peptides (cTP), thylakoid lumenal Tranist Peptides (luTP) and proteins with no targeting peptide (noTP). All frequencies higher than 10% are marked in bold. The top part shows the frequency of the short-chained amino acids that can be cleaved by MAPs. The SUM line is the sum of all these short-chained amino acids, and the Total line is the number of proteins in each class.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | AA | noTP-P | noTP-M | noTP-F | noTP-O | SP-P | SP-M | SP-F | SP-O | mTP-P | mTP-M | mTP-F | mTP-O | cTP | luTP | |  | Ala | 21.7% | 23.7% | 12.4% | 16.0% | 47.7% | 15.7% | 6.9% | 10.0% | 40.8% | 40.2% | 6.3% | 0.0% | 71.3% | 71.1% | |  | Cys | 0.4% | 0.6% | 0.4% | 0.0% | 0.0% | 0.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |  | Gly | 10.6% | 6.1% | 5.5% | 4.2% | 6.9% | 8.1% | 4.1% | 0.0% | 1.5% | 0.8% | 1.1% | 0.0% | 1.4% | 0.0% | |  | Pro | 3.1% | 6.0% | 5.4% | 3.4% | 0.4% | 2.2% | 2.1% | 0.0% | 0.8% | 0.8% | 1.1% | 0.0% | 0.0% | 0.0% | |  | Ser | 12.8% | 14.4% | 26.6% | 16.8% | 4.0% | 4.1% | 4.1% | 6.7% | 9.2% | 4.3% | 12.6% | 12.5% | 10.6% | 8.9% | |  | Thr | 3.3% | 4.5% | 7.6% | 5.9% | 2.9% | 3.2% | 0.7% | 0.0% | 1.5% | 1.2% | 2.1% | 0.0% | 2.3% | 2.2% | |  | Val | 5.1% | 4.4% | 4.9% | 3.4% | 4.3% | 3.4% | 9.0% | 0.0% | 1.5% | 2.4% | 0.0% | 0.0% | 1.4% | 4.4% | |  | SUM | 57% | 59.7% | 62.8% | 49.7% | 66.2% | 37.5% | 26.9% | 16.7% | 55.3% | 49.7% | 23.2% | 12.5% | 87% | 86.6% | |  | Asp | 8.5% | 7.8% | 7.1% | 6.7% | 1.1% | 2.7% | 0.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.5% | 0.0% | |  | Glu | 13.1% | 10.5% | 5.9% | 11.8% | 5.8% | 4.8% | 0.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 3.7% | 2.2% | |  | Phe | 1.2% | 1.7% | 1.8% | 3.4% | 0.0% | 1.3% | 4.8% | 0.0% | 5.4% | 6.7% | 12.6% | 12.5% | 0.0% | 0.0% | |  | His | 0.4% | 0.9% | 0.7% | 0.0% | 1.1% | 1.4% | 1.4% | 0.0% | 1.5% | 0.8% | 1.1% | 0.0% | 0.0% | 2.2% | |  | Ile | 2.0% | 1.4% | 1.8% | 4.2% | 2.5% | 2.2% | 4.1% | 3.3% | 3.1% | 2.4% | 4.2% | 12.5% | 0.9% | 0.0% | |  | Lys | 5.2% | 3.4% | 4.7% | 5.9% | 10.8% | 19.5% | 17.9% | 46.7% | 7.7% | 1.2% | 5.3% | 0.0% | 0.5% | 0.0% | |  | Leu | 1.8% | 3.3% | 3.3% | 4.2% | 1.1% | 5.4% | 9.7% | 3.3% | 5.4% | 28.7% | 38.9% | 25.0% | 2.8% | 0.0% | |  | Met | 2.5% | 1.6% | 1.1% | 1.7% | 2.9% | 2.9% | 4.1% | 0.0% | 4.6% | 0.4% | 2.1% | 0.0% | 2.3% | 2.2% | |  | Asn | 2.5% | 3.7% | 5.4% | 6.7% | 3.6% | 5.0% | 4.1% | 20.0% | 1.5% | 0.0% | 1.1% | 0.0% | 0.5% | 0.0% | |  | Gln | 1.6% | 2.0% | 1.9% | 0.0% | 0.0% | 2.5% | 8.3% | 0.0% | 3.8% | 2.8% | 3.2% | 12.5% | 1.4% | 4.4% | |  | Arg | 2.6% | 2.7% | 2.4% | 5.0% | 4.7% | 12.3% | 15.2% | 10.0% | 6.2% | 2.4% | 3.2% | 25.0% | 0.0% | 0.0% | |  | Trp | 0.1% | 0.6% | 0.2% | 0.0% | 0.4% | 1.7% | 0.0% | 0.0% | 2.3% | 3.5% | 2.1% | 0.0% | 0.0% | 2.2% | |  | Tyr | 1.4% | 0.7% | 0.8% | 0.8% | 0.0% | 0.9% | 2.1% | 0.0% | 3.1% | 1.6% | 3.2% | 0.0% | 0.5% | 0.0% | |  | Total | 1802 | 5354 | 2263 | 118 | 282 | 2251 | 133 | 31 | 125 | 263 | 103 | 8 | 227 | 45 | |