Supplementary Data

1.1 Training set

1.1.1 SS composition

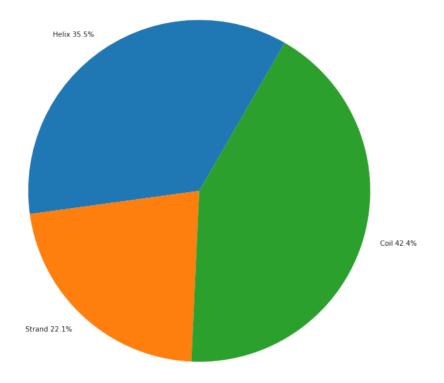


Fig. S 2. Secondary structure composition of the training set.

1.1.2 Residue composition

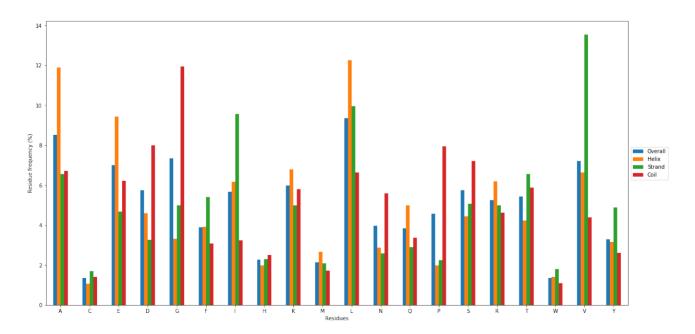


Fig. S 3. Residue composition of the training set.

2 Elez

1.1.3 Residue composition: windows (helix vs strand)

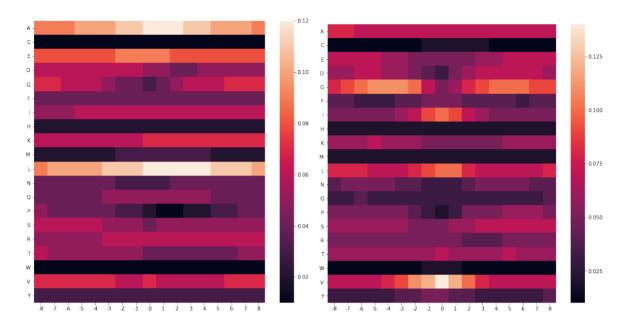
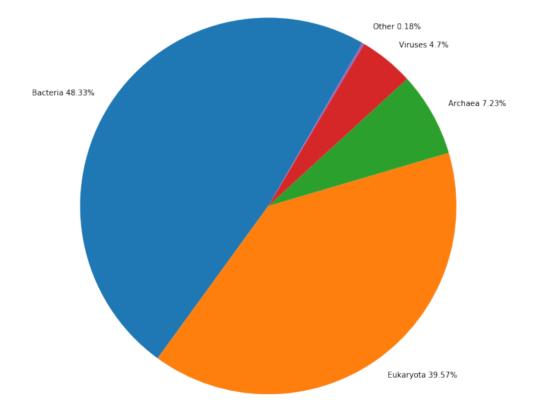


Fig. S 4. Window residue composition of the training set. On the left the composition of a 17-residue window whose central residue's conformation is helix. On the right the composition of a 17-residue window whose central residue's conformation is strand.

1.1.4 Taxonomic classification: kingdom



 $\textbf{Fig. S 5.} \ Taxonomic \ classification \ for \ sequences \ of \ the \ training \ set \ grouped \ by \ kingdom.$

1.1.5 Taxonomic classification: species

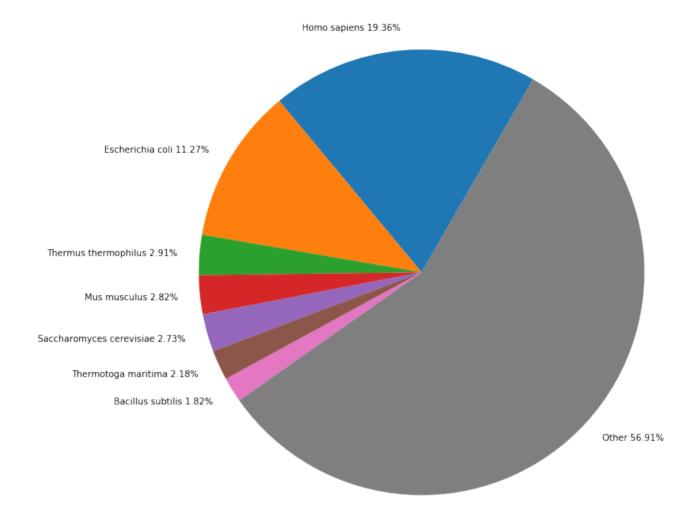
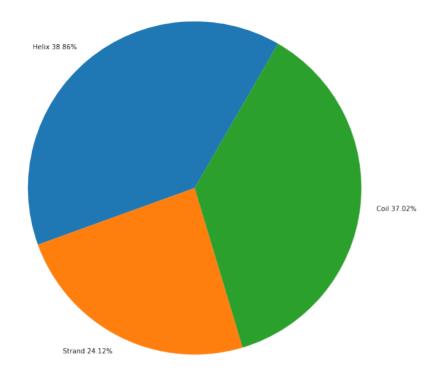


Fig. S 6. Taxonomic classification for sequences of the training set grouped by species.

4 Elez

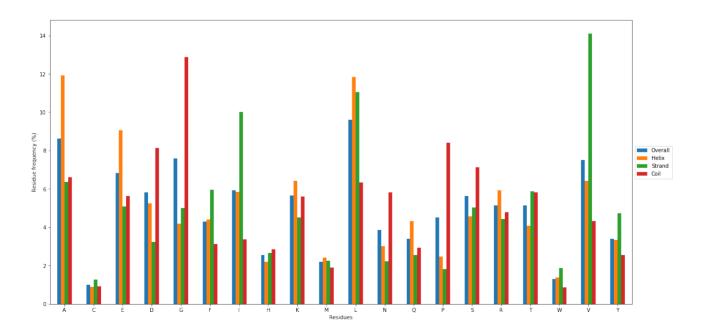
1.2 Blind test set

1.2.1 SS composition



 $\textbf{Fig. S 7.} \ Secondary \ structure \ composition \ of \ the \ blind \ test \ set.$

1.2.2 Residue composition



 $\textbf{Fig. S 8.} \ Residue \ composition \ of \ the \ blind \ test \ set.$

1.2.3 Residue composition: windows (helix vs strand)

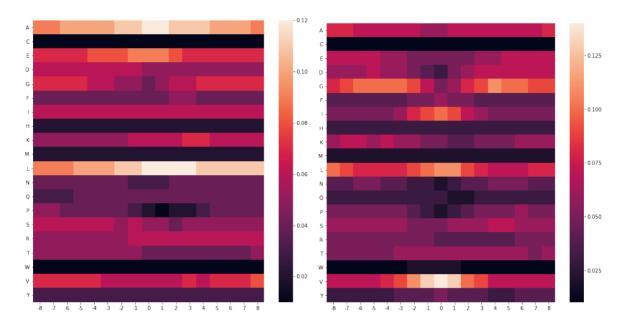


Fig. S 9. Window residue composition of the blind test set. On the left the composition of a 17-residue window whose central residue's conformation is helix. On the right the composition of a 17-residue window whose central residue's conformation is strand.

1.2.4 Taxonomic classification: kingdom

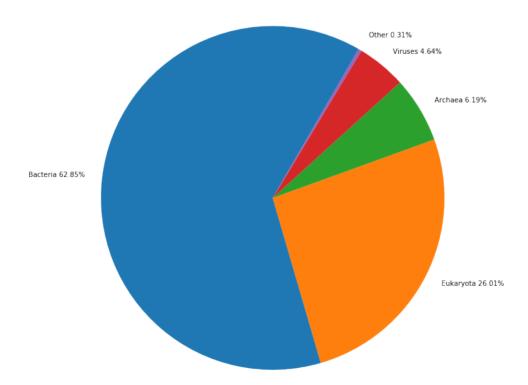


Fig. S 10. Taxonomic classification for sequences of the blind test set grouped by kingdom.

6 Elez

1.2.5 Taxonomic classification: species

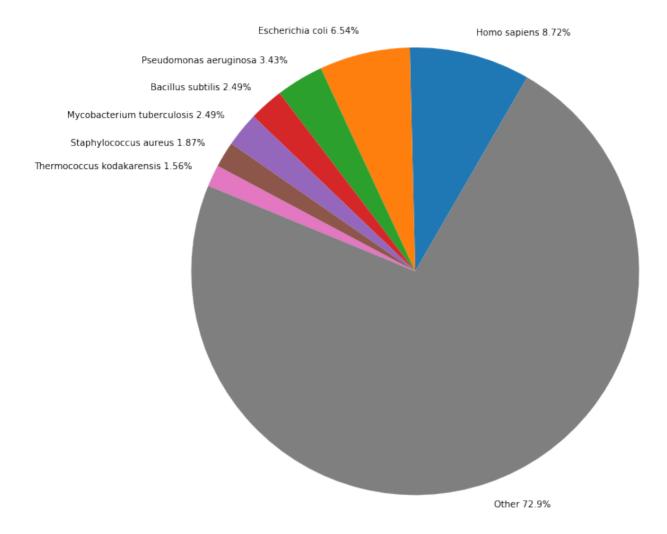


Fig. S 11. Taxonomic classification for sequences of the blind test set grouped by species.