

**Online Supplementary Materials B.** The testing dataset contains 265 plant proteins classified into 11 subcellular locations according to the experimental annotations. Both the accession numbers and sequences are given. None of the proteins has  $\geq 25\%$  sequence identity to any others in the same subcellular location of either the dataset here or the learning dataset in the Online Supplementary Materials A. See the text of the paper for further explanation.

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(1) 2 cell wall proteins

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>P26792

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(2) 124 chloroplast proteins

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>Q7X914

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(5) 10 extracellular proteins

>P80915

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 F AWS GPLG WL VPSE  
 I QTL ETRGAGMSMAVIVNFLFSFVIGQAFLSMMCAMRWGVFL FAGW VV IMT FFV  
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