

Online Supporting Information S3a. The degenerate testing dataset used for a head-to-head comparison between **Predotar** (Small et al. Proteomics, 2004, 4, 1581-1590.) and **iLoc-Plant** of this paper. The dataset contains 150 single-location proteins classified into the following 3 subcellular locations: (1) endoplasmic reticulum, (2) mitochondrion, and (3) plastid, with each containing 50 protein sequences that were randomly picked from Swiss-Prot database (Release 2011_06 of 31-May-11). To avoid bias, none of the proteins included here occurs in the training dataset of **Predotar**, nor in the training dataset of **iLoc-Plant**. See the text of the paper for further explanation.

(1) 50 Endoplasmic Reticulum proteins

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