

Online Supporting Information S3d. A demonstration to show the power of **iLoc-Hum** in identifying the multiple locations of proteins via a head-to-head comparison between the results predicted by **iLoc-Hum** and those by **Wolf PSORT** (Horton, et al. *Nucleic Acids Res* 35, W585-587) on the 30 multiple-location proteins in the [Online Supporting Information S3c](#). For facilitating comparison, the corresponding experimental subcellular locations as annotated in Swiss-Prot databank (Release 2011_06 of 31-May-11) are also given. As shown from the results below, of the 30 proteins, 26 were perfectly predicted by **iLoc-Hum** for their multiple-location sites without any false positive and false negative, while 4 were partially correctly predicted. This kind of capacity of **iLoc-Hum** in dealing with multiple-location proteins is beyond the reach of **Wolf PSORT**.

Protein accession number	iLoc-Hum	Wolf PSORT	Experimental result annotated in Swiss-Prot database
A0FI79	Cytoplasmic; Golgi apparatus	Nuclear	Cytoplasmic; Golgi apparatus
A0JPI4	Cytoplasmic; Golgi apparatus	Nuclear	Cytoplasmic; Golgi apparatus
A6R3V7	Endoplasmic reticulum; Golgi apparatus	Plasma membrane	Cytoplasmic; Endoplasmic reticulum; Golgi apparatus;
A7YY49	Endoplasmic reticulum; Golgi apparatus	Plasma membrane	Endoplasmic reticulum; Golgi apparatus
B0XYF0	Cytoplasmic; Golgi apparatus	Plasma membrane	Cytoplasmic; Golgi apparatus; Endoplasmic reticulum
B2WDD8	Cytoplasmic; Golgi apparatus;	Plasma membrane	Cytoplasmic; Golgi apparatus; Endoplasmic reticulum
O00628	Cytoplasmic; Peroxisomal	Cytoplasmic	Cytoplasmic; Peroxisomal
O08547	Endoplasmic reticulum; Golgi apparatus	Cytoplasmic	Endoplasmic reticulum; Golgi apparatus
O08595	Endoplasmic reticulum; Golgi apparatus	Cytoplasmic	Endoplasmic reticulum; Golgi apparatus
O09174	Mitochondrion; Peroxisomal	Cytoplasmic	Mitochondrion; Peroxisomal
O13825	Endoplasmic reticulum; Golgi apparatus	Extracellular	Endoplasmic reticulum; Golgi apparatus
O13932	Endoplasmic reticulum; Golgi apparatus	Cytoplasmic	Endoplasmic reticulum; Golgi apparatus
O13946	Endoplasmic reticulum; Golgi apparatus	Extracellular	Endoplasmic reticulum; Golgi apparatus
O43933	Cytoplasmic; Peroxisomal	Nuclear	Cytoplasmic; Peroxisomal
O74941	Cytoplasmic; Peroxisomal	Mitochondrion	Cytoplasmic; Peroxisomal
O75874	Cytoplasmic; Peroxisomal	Cytoplasmic	Cytoplasmic; Peroxisomal
P21549	Mitochondrion; Peroxisomal	Cytoplasmic	Mitochondrion; Peroxisomal

P24004	Cytoplasmic; Peroxisomal	Cytoplasmic	Cytoplasmic; Peroxisomal
P34913	Cytoplasmic; Peroxisomal	Extracellular	Cytoplasmic; Peroxisomal
P34914	Cytoplasmic; Peroxisomal	Extracellular	Cytoplasmic; Peroxisomal
P50542	Cytoplasmic; Peroxisomal	Nuclear	Cytoplasmic; Peroxisomal
P70473	Mitochondrion; Peroxisomal	Cytoplasmic	Mitochondrion; Peroxisomal
P80299	Cytoplasmic; Peroxisomal	Extracellular	Cytoplasmic; Peroxisomal
P84817	Cytoplasmic; Peroxisomal	Cytoplasmic	Cytoplasmic; Peroxisomal
P97865	Cytoplasmic; Peroxisomal	Cytoplasmic	Cytoplasmic; Peroxisomal
Q03426	Cytoplasmic; Peroxisomal	Extracellular	Cytoplasmic; Peroxisomal
Q8R537	Cytoplasmic; Peroxisomal	Cytoplasmic	Cytoplasmic; Peroxisomal
Q92820	Extracellular; Lysosomal	Extracellular	Extracellular; Lysosomal
Q9CQ92	Cytoplasmic; Peroxisomal	Cytoplasmic	Mitochondrion; Peroxisomal
Q9UHK6	Mitochondrion; Peroxisomal	Mitochondrion	Mitochondrion; Peroxisomal