

Online Supporting Information S2b. A head-to-head comparison between the results predicted by **iLoc-Hum** and those by **MultiLoc2**, the updated version of **MultiLoc** (Hoglund et al., *Bioinformatics* 2006, 22, 1158-1165), on the 270 independent single-location proteins listed in the [Online Supporting Information S2a](#). For facilitating comparison, the corresponding experimental subcellular locations as annotated in Swiss-Prot databank (Release 2011_06 of 31-May-11) are also given.

| Protein accession number | iLoc-Hum | MultiLoc2 | Experimental result annotated in Swiss-Prot database |
|--------------------------|-------------------------------|------------------|--|
| A5A3E0 | Cytoplasmic | Cytoplasmic | Cytoplasmic |
| A6NGB9 | Cytoplasmic | Cytoplasmic | Cytoplasmic |
| A8MTZ0 | Cytoplasmic | Cytoplasmic | Cytoplasmic |
| O14827 | Cytoplasmic | Cytoplasmic | Cytoplasmic |
| O95810 | Cytoplasmic | Nuclear | Cytoplasmic |
| P14317 | Cytoplasmic | Nuclear | Cytoplasmic |
| A8K8P3 | Cytoplasmic | Cytoplasmic | Cytoplasmic |
| A8MTJ3 | Cytoplasmic | Cytoplasmic | Cytoplasmic |
| A9UHW6 | Cytoplasmic | Cytoplasmic | Cytoplasmic |
| O00159 | Cytoplasmic; Extracellular | Cytoplasmic | Cytoplasmic |
| O00167 | Nuclear | Peroxisomal | Cytoplasmic |
| O00294 | Cytoplasmic | Nuclear | Cytoplasmic |
| O14907 | Nuclear | Cytoplasmic | Cytoplasmic |
| O14965 | Cytoplasmic | Cytoplasmic | Cytoplasmic |
| O14974 | Cytoplasmic | Nuclear | Cytoplasmic |
| O15061 | Cytoplasmic | Cytoplasmic | Cytoplasmic |
| O15083 | Cytoplasmic | Nuclear | Cytoplasmic |
| O15231 | Nuclear | Cytoplasmic | Cytoplasmic |
| O15344 | Cytoplasmic | Nuclear | Cytoplasmic |
| O43164 | Synapse | Nuclear | Cytoplasmic |
| O60259 | Extracellular | Extracellular | Cytoplasmic |
| O60759 | Cytoplasmic | Peroxisomal | Cytoplasmic |
| O75190 | Cytoplasmic | Nuclear | Cytoplasmic |
| O94811 | Cytoplasmic | Nuclear | Cytoplasmic |
| O94927 | Centriole | Cytoplasmic | Cytoplasmic |
| P14136 | Cytoplasmic | Mitochondrion | Cytoplasmic |
| P35573 | Lysosomal | Cytoplasmic | Cytoplasmic |

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|--------|----------------------------|-----------------------|-----------------------|
| P53370 | Cytoplasmic | Mitochondrion | Cytoplasmic |
| P78362 | Cytoplasmic | Nuclear | Cytoplasmic |
| Q01484 | Cytoplasmic | Nuclear | Cytoplasmic |
| O43567 | Cytoplasmic; Nuclear | Golgi apparatus | Endoplasmic reticulum |
| P07237 | Endoplasmic reticulum | Endoplasmic reticulum | Endoplasmic reticulum |
| O75900 | Cytoplasmic; Extracellular | Golgi apparatus | Endoplasmic reticulum |
| O55232 | Nucleus; | Extracellular | Endoplasmic reticulum |
| O77588 | Endoplasmic reticulum | Endoplasmic reticulum | Endoplasmic reticulum |
| O60568 | Endoplasmic reticulum | Endoplasmic reticulum | Endoplasmic reticulum |
| O08601 | Endoplasmic reticulum | Endoplasmic reticulum | Endoplasmic reticulum |
| O94491 | Endoplasmic reticulum | Cytoplasmic | Endoplasmic reticulum |
| O59833 | Endoplasmic reticulum | Cytoplasmic | Endoplasmic reticulum |
| O42707 | Endoplasmic reticulum | Golgi apparatus | Endoplasmic reticulum |
| O94401 | Endoplasmic reticulum | Golgi apparatus | Endoplasmic reticulum |
| P12337 | Endoplasmic reticulum | Peroxisomal | Endoplasmic reticulum |
| Q29550 | Endoplasmic reticulum | Cytoplasmic | Endoplasmic reticulum |
| Q9D1Q6 | Endoplasmic reticulum | Endoplasmic reticulum | Endoplasmic reticulum |
| O35949 | Endoplasmic reticulum | Golgi apparatus | Endoplasmic reticulum |
| P16232 | Endoplasmic reticulum | Peroxisomal | Endoplasmic reticulum |
| Q6QLL4 | Endoplasmic reticulum | Peroxisomal | Endoplasmic reticulum |
| P13516 | Endoplasmic reticulum | Peroxisomal | Endoplasmic reticulum |
| Q9TT94 | Endoplasmic reticulum | Peroxisomal | Endoplasmic reticulum |
| Q6P7B9 | Endoplasmic reticulum | Peroxisomal | Endoplasmic reticulum |
| P13011 | Endoplasmic | Peroxisomal | Endoplasmic reticulum |

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|--------|-----------------------|-----------------------|-----------------------|
| | reticulum | | |
| P07308 | Endoplasmic reticulum | Cytoplasmic | Endoplasmic reticulum |
| Q6AYY8 | Endoplasmic reticulum | Peroxisomal | Endoplasmic reticulum |
| P19324 | Endoplasmic reticulum | Extracellular | Endoplasmic reticulum |
| P12244 | Endoplasmic reticulum | Endoplasmic reticulum | Endoplasmic reticulum |
| O54998 | Endoplasmic reticulum | Endoplasmic reticulum | Endoplasmic reticulum |
| Q64573 | Endoplasmic reticulum | Endoplasmic reticulum | Endoplasmic reticulum |
| Q64176 | Endoplasmic reticulum | Endoplasmic reticulum | Endoplasmic reticulum |
| Q99KV1 | Endoplasmic reticulum | Endoplasmic reticulum | Endoplasmic reticulum |
| P81999 | Endoplasmic reticulum | Endoplasmic reticulum | Endoplasmic reticulum |
| O04012 | Extracellular | Extracellular | Extracellular |
| O04011 | Extracellular | Extracellular | Extracellular |
| A2ASQ1 | Cytoplasmic | Plasma membrane | Extracellular |
| A2SW69 | Golgi apparatus | Cytoplasmic | Extracellular |
| O42720 | Extracellular | Extracellular | Extracellular |
| O54858 | Nucleus | Extracellular | Extracellular |
| O43405 | Extracellular | Endoplasmic reticulum | Extracellular |
| O42182 | Extracellular | Extracellular | Extracellular |
| O35568 | Extracellular | Extracellular | Extracellular |
| O46378 | Extracellular | Cytoplasmic | Extracellular |
| A2AJ76 | Cytoplasmic | Plasma membrane | Extracellular |
| O42235 | Extracellular | Endoplasmic reticulum | Extracellular |
| O08677 | Extracellular | Extracellular | Extracellular |
| O15230 | Extracellular | Extracellular | Extracellular |
| A4D0S4 | Extracellular | Extracellular | Extracellular |
| O18767 | Extracellular | Plasma membrane | Extracellular |
| C7G0B5 | Cytoplasmic | Extracellular | Extracellular |
| O09164 | Extracellular | Endoplasmic reticulum | Extracellular |

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|--------|-------------------------------|--------------------------|-----------------|
| A1EC31 | Cytoplasmic | Extracellular | Extracellular |
| O41800 | Nucleus | Cytoplasmic | Extracellular |
| O00744 | Extracellular | Extracellular | Extracellular |
| O13267 | Extracellular | Extracellular | Extracellular |
| O42122 | Extracellular | Extracellular | Extracellular |
| O15978 | Extracellular | Extracellular | Extracellular |
| O00755 | Extracellular | Extracellular | Extracellular |
| O42280 | Extracellular | Extracellular | Extracellular |
| O14904 | Extracellular | Extracellular | Extracellular |
| O14905 | Extracellular | Extracellular | Extracellular |
| O35468 | Extracellular | Extracellular | Extracellular |
| O54767 | Extracellular | Plasma membrane | Extracellular |
| P61106 | Golgi apparatus | Cytoplasmic | Golgi apparatus |
| P61204 | Golgi apparatus; Lysosomal | Cytoplasmic | Golgi apparatus |
| P62330 | Golgi apparatus; Lysosomal | Cytoplasmic | Golgi apparatus |
| P84077 | Golgi apparatus; Lysosomal | Cytoplasmic | Golgi apparatus |
| P84085 | Golgi apparatus; Lysosomal | Mitochondrion | Golgi apparatus |
| A1X149 | Cytoplasmic | Cytoplasmic | Golgi apparatus |
| A7ERK2 | Plasma membrane | Cytoplasmic | Golgi apparatus |
| A7THG4 | Plasma membrane | Cytoplasmic | Golgi apparatus |
| A6ZS37 | Golgi apparatus | Cytoplasmic | Golgi apparatus |
| A2VDR8 | Golgi apparatus | Cytoplasmic | Golgi apparatus |
| A2YHR9 | Golgi apparatus | Mitochondrion | Golgi apparatus |
| A2ZAK8 | Golgi apparatus | Cytoplasmic | Golgi apparatus |
| A2YU42 | Golgi apparatus | Cytoplasmic | Golgi apparatus |
| A2YCI3 | Golgi apparatus | Cytoplasmic | Golgi apparatus |
| A1IGX5 | Golgi apparatus | Endoplasmic reticulum | Golgi apparatus |
| A7S1L6 | Plasma membrane | Peroxisomal | Golgi apparatus |
| A1YGR5 | Cytoplasmic | Golgi apparatus | Golgi apparatus |
| B0F9L4 | Golgi apparatus | Cytoplasmic | Golgi apparatus |
| A8XP14 | Golgi apparatus | Peroxisomal | Golgi apparatus |
| A6ZZS6 | Golgi apparatus | Golgi apparatus | Golgi apparatus |

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|--------|-----------------|-----------------------|-----------------|
| A5PJ65 | Golgi apparatus | Golgi apparatus | Golgi apparatus |
| A0AAS4 | Golgi apparatus | Cytoplasmic | Golgi apparatus |
| A7S6Y0 | Plasma membrane | Endoplasmic reticulum | Golgi apparatus |
| A4K2N5 | Golgi apparatus | Extracellular | Golgi apparatus |
| A4K2W1 | Golgi apparatus | Extracellular | Golgi apparatus |
| A7EMV1 | Plasma membrane | Endoplasmic reticulum | Golgi apparatus |
| A7TGB4 | Plasma membrane | Golgi apparatus | Golgi apparatus |
| A7EFY0 | Plasma membrane | Peroxisomal | Golgi apparatus |
| A7TMU9 | Plasma membrane | Peroxisomal | Golgi apparatus |
| A1C8D8 | Cytoplasmic | Golgi apparatus | Golgi apparatus |
| Q64191 | Lysosomal | Lysosomal | Lysosomal |
| O02467 | Lysosomal | Cytoplasmic | Lysosomal |
| P00795 | Lysosomal | Cytoplasmic | Lysosomal |
| P09648 | Lysosomal | Cytoplasmic | Lysosomal |
| P25773 | Lysosomal | Cytoplasmic | Lysosomal |
| Q26534 | Lysosomal | Cytoplasmic | Lysosomal |
| A7MB63 | Lysosomal | Extracellular | Lysosomal |
| O60931 | Lysosomal | Extracellular | Lysosomal |
| P54639 | Lysosomal | Extracellular | Lysosomal |
| P54640 | Nucleus | Lysosomal | Lysosomal |
| P06340 | Plasma membrane | Lysosomal | Lysosomal |
| Q5R8E3 | Lysosomal | Lysosomal | Lysosomal |
| Q13571 | Lysosomal | Endoplasmic reticulum | Lysosomal |
| B5X7X4 | Lysosomal | Mitochondrion | Lysosomal |
| B5FY55 | Lysosomal | Mitochondrion | Lysosomal |
| Q63ZJ2 | Lysosomal | Mitochondrion | Lysosomal |
| Q60HE8 | Lysosomal | Plasma membrane | Lysosomal |
| A8WH34 | Plasma membrane | Lysosomal | Lysosomal |
| C0HBB2 | Plasma membrane | Lysosomal | Lysosomal |
| A6BMK7 | Lysosomal | Plasma membrane | Lysosomal |
| O35657 | Lysosomal | Mitochondrion | Lysosomal |
| Q0P5F0 | Lysosomal | Mitochondrion | Lysosomal |
| Q5NVF6 | Lysosomal | Lysosomal | Lysosomal |

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| P26779 | Lysosomal | Extracellular | Lysosomal |
| P07602 | Lysosomal | Extracellular | Lysosomal |
| D3ZEH5 | Plasma membrane | Lysosomal | Lysosomal |
| Q66I51 | Lysosomal | Cytoplasmic | Lysosomal |
| Q5PPM8 | Lysosomal | Cytoplasmic | Lysosomal |
| Q5XKA6 | Lysosomal | Cytoplasmic | Lysosomal |
| Q60V75 | Lysosomal | Cytoplasmic | Lysosomal |
| O14925 | Mitochondrion | Cytoplasmic | Mitochondrion |
| O43772 | Mitochondrion | Peroxisomal | Mitochondrion |
| O75324 | Mitochondrion | Golgi apparatus | Mitochondrion |
| P00156 | Mitochondrion | Plasma membrane | Mitochondrion |
| P00414 | Mitochondrion | Extracellular | Mitochondrion |
| P03886 | Mitochondrion | Extracellular | Mitochondrion |
| P03915 | Mitochondrion | Extracellular | Mitochondrion |
| P05141 | Mitochondrion | Cytoplasmic | Mitochondrion |
| P17152 | Mitochondrion | Mitochondrion | Mitochondrion |
| P19099 | Mitochondrion | Mitochondrion | Mitochondrion |
| P23368 | Mitochondrion | Mitochondrion | Mitochondrion |
| P25874 | Mitochondrion | Peroxisomal | Mitochondrion |
| P27144 | Mitochondrion | Mitochondrion | Mitochondrion |
| P27338 | Mitochondrion | Peroxisomal | Mitochondrion |
| P36404 | Mitochondrion | Cytoplasmic | Mitochondrion |
| P40305 | Mitochondrion | Extracellular | Mitochondrion |
| P49448 | Mitochondrion | Mitochondrion | Mitochondrion |
| P49675 | Mitochondrion | Mitochondrion | Mitochondrion |
| P50336 | Mitochondrion | Mitochondrion | Mitochondrion |
| O94826 | Mitochondrion | Plasma membrane | Mitochondrion |
| O95674 | Mitochondrion | Plasma membrane | Mitochondrion |
| P00973 | Mitochondrion | Cytoplasmic | Mitochondrion |
| P0C869 | Mitochondrion | Cytoplasmic | Mitochondrion |
| P22557 | Mitochondrion | Peroxisomal | Mitochondrion |
| P29803 | Mitochondrion | Mitochondrion | Mitochondrion |
| P49419 | Mitochondrion | Mitochondrion | Mitochondrion |
| Q5HZI1 | Plasma membrane | Cytoplasmic | Mitochondrion |
| P12617 | Mitochondrion; Cytoplasm; | Peroxisomal | Mitochondrion |

| | Peroxisomal Mitochondrion; Cytoplasm; Peroxisomal | Peroxisomal | Mitochondrion |
|--------|--|---------------|---------------|
| O95822 | | | |
| P99029 | Peroxisomal | Mitochondrion | Mitochondrion |
| A6NDE4 | Cytoplasmic | Nuclear | Nuclear |
| A6NEQ0 | Cytoplasmic | Nuclear | Nuclear |
| A6NHQ2 | Nuclear | Nuclear | Nuclear |
| O00268 | Nuclear | Nuclear | Nuclear |
| O00321 | Nuclear | Nuclear | Nuclear |
| O00716 | Nuclear | Nuclear | Nuclear |
| O14802 | Nuclear | Nuclear | Nuclear |
| O14901 | Nuclear | Cytoplasmic | Nuclear |
| O14981 | Nuclear | Nuclear | Nuclear |
| O43293 | Cytoplasmic | Cytoplasmic | Nuclear |
| O43683 | Nuclear | Cytoplasmic | Nuclear |
| O43805 | Nuclear; Centriole | Cytoplasmic | Nuclear |
| O75386 | Plasma membrane | Nuclear | Nuclear |
| P39019 | Mitochondrion | Cytoplasmic | Nuclear |
| A4D1E9 | Nuclear | Cytoplasmic | Nuclear |
| O00712 | Nuclear | Nuclear | Nuclear |
| O15016 | Nuclear | Nuclear | Nuclear |
| O15047 | Nuclear | Nuclear | Nuclear |
| O15084 | Nuclear | Cytoplasmic | Nuclear |
| O15151 | Nuclear | Nuclear | Nuclear |
| O15265 | Nuclear | Cytoplasmic | Nuclear |
| O43294 | Cytoskeleton | Cytoplasmic | Nuclear |
| O43482 | Nuclear | Mitochondrion | Nuclear |
| O60306 | Nuclear | Cytoplasmic | Nuclear |
| O60729 | Nuclear; Endoplasmic reticulum | Mitochondrion | Nuclear |
| O75530 | Nuclear | Cytoplasmic | Nuclear |
| P61088 | Cytoplasmic | Peroxisomal | Nuclear |
| P68036 | Cytoplasmic | Peroxisomal | Nuclear |
| Q00688 | Nuclear | Cytoplasmic | Nuclear |
| Q01196 | Nuclear | Mitochondrion | Nuclear |

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| B3DMA2 | Peroxisomal | Peroxisomal | Peroxisomal |
| P07872 | Peroxisomal | Peroxisomal | Peroxisomal |
| O74934 | Peroxisomal | Peroxisomal | Peroxisomal |
| O64894 | Peroxisomal | Peroxisomal | Peroxisomal |
| O74935 | Peroxisomal | Peroxisomal | Peroxisomal |
| O74936 | Peroxisomal | Peroxisomal | Peroxisomal |
| O00116 | Peroxisomal | Peroxisomal | Peroxisomal |
| O64883 | Lysosomal | Mitochondrion | Peroxisomal |
| P17598 | Peroxisomal | Cytoplasmic | Peroxisomal |
| P18122 | Peroxisomal | Cytoplasmic | Peroxisomal |
| P25819 | Peroxisomal | Cytoplasmic | Peroxisomal |
| P30567 | Peroxisomal | Cytoplasmic | Peroxisomal |
| P25890 | Peroxisomal | Cytoplasmic | Peroxisomal |
| O49506 | Peroxisomal | Peroxisomal | Peroxisomal |
| O35586 | Cytoplasmic | Peroxisomal | Peroxisomal |
| O35760 | Cytoplasmic | Peroxisomal | Peroxisomal |
| P00371 | Peroxisomal | Peroxisomal | Peroxisomal |
| O18778 | Peroxisomal | Mitochondrion | Peroxisomal |
| O14832 | Peroxisomal | Mitochondrion | Peroxisomal |
| O35386 | Peroxisomal | Mitochondrion | Peroxisomal |
| O60065 | Peroxisomal | Peroxisomal | Peroxisomal |
| O94516 | Peroxisomal | Cytoplasmic | Peroxisomal |
| O59807 | Peroxisomal | Golgi apparatus | Peroxisomal |
| O70579 | Mitochondrion | Peroxisomal | Peroxisomal |
| O75192 | Peroxisomal | Peroxisomal | Peroxisomal |
| O70597 | Peroxisomal | Peroxisomal | Peroxisomal |
| O96011 | Peroxisomal | Peroxisomal | Peroxisomal |
| O80845 | Peroxisomal | Peroxisomal | Peroxisomal |
| P09110 | Peroxisomal | Mitochondrion | Peroxisomal |
| P09118 | Peroxisomal | Peroxisomal | Peroxisomal |

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|--------|-----------------|-----------------|-----------------|
| A3KFT3 | Plasma membrane | Plasma membrane | Plasma membrane |
| A4D2G3 | Plasma membrane | Plasma membrane | Plasma membrane |
| A6NCV1 | Plasma membrane | Plasma membrane | Plasma membrane |
| A6ND48 | Plasma membrane | Plasma membrane | Plasma membrane |
| A6NDH6 | Plasma membrane | Plasma membrane | Plasma membrane |

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| A6NET4 | Plasma membrane | Plasma membrane | Plasma membrane |
| A6NF89 | Plasma membrane | Plasma membrane | Plasma membrane |
| A6NFC9 | Plasma membrane | Plasma membrane | Plasma membrane |
| A6NGY5 | Plasma membrane | Plasma membrane | Plasma membrane |
| A6NGZ8 | Plasma membrane | Extracellular | Plasma membrane |
| A6NH00 | Plasma membrane | Plasma membrane | Plasma membrane |
| A6NHA9 | Plasma membrane | Plasma membrane | Plasma membrane |
| A6NHG9 | Plasma membrane | Plasma membrane | Plasma membrane |
| A6NIJ9 | Plasma membrane | Plasma membrane | Plasma membrane |
| A6NJW9 | Plasma membrane | Endoplasmic reticulum | Plasma membrane |
| A6NLE4 | Plasma membrane | Peroxisomal | Plasma membrane |
| B2RN74 | Plasma membrane | Plasma membrane | Plasma membrane |
| B7U540 | Plasma membrane | Peroxisomal | Plasma membrane |
| O00212 | Plasma membrane | Cytoplasmic | Plasma membrane |
| O00501 | Plasma membrane | Extracellular | Plasma membrane |
| O00526 | Plasma membrane | Endoplasmic reticulum | Plasma membrane |
| O14610 | Plasma membrane | Cytoplasmic | Plasma membrane |
| O14807 | Plasma membrane | Cytoplasmic | Plasma membrane |
| O14910 | Plasma membrane | Cytoplasmic | Plasma membrane |
| A0FGR8 | Plasma membrane | Mitochondrion | Plasma membrane |
| A0FGR9 | Plasma membrane | Endoplasmic reticulum | Plasma membrane |
| A4D1S5 | Plasma membrane | Cytoplasmic | Plasma membrane |
| A6NDL8 | Plasma membrane | Plasma membrane | Plasma membrane |
| O00451 | Plasma membrane | Extracellular | Plasma membrane |
| O14494 | Plasma membrane | Endoplasmic reticulum | Plasma membrane |
