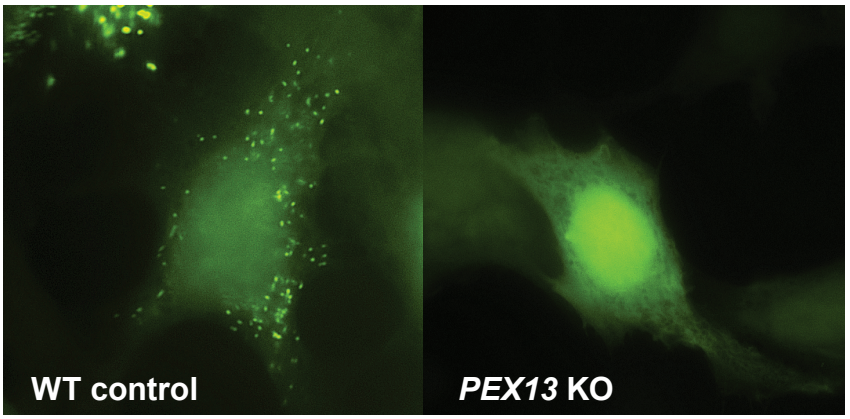
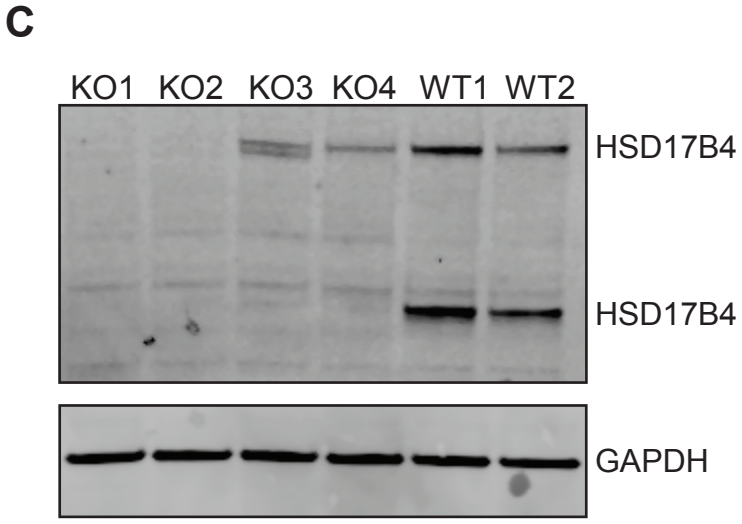
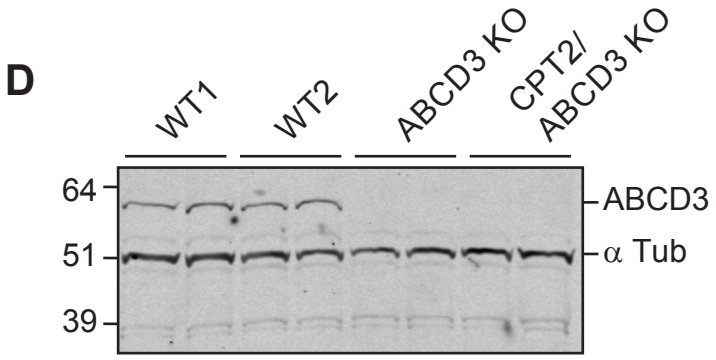
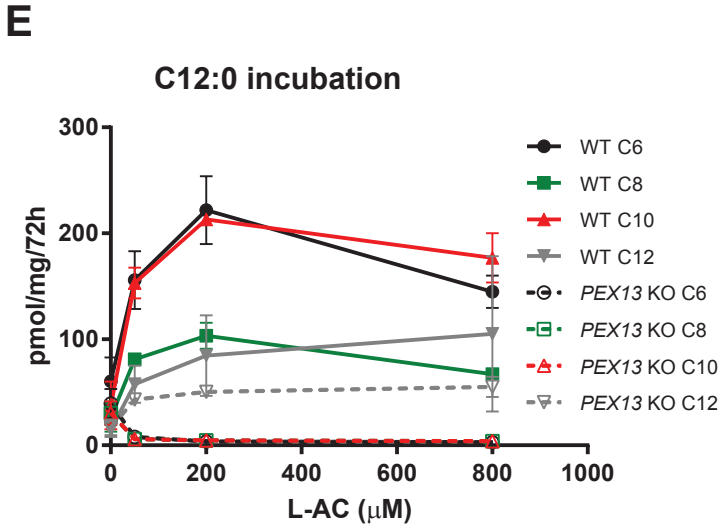
A

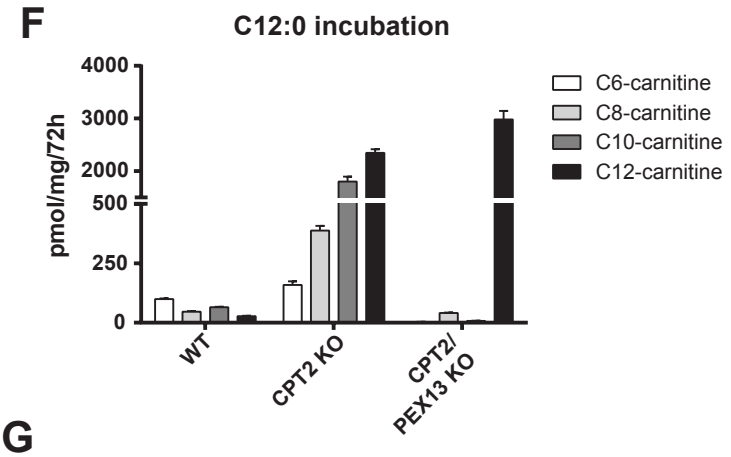
Gene	Expression (TPM)
ABCD1	1.9
ABCD2	0
ABCD3	35.3
HSD17B4	71.8
EHHADH	4.8
CPT2	10.2
CPT1A	5.8
PEX13	8.9











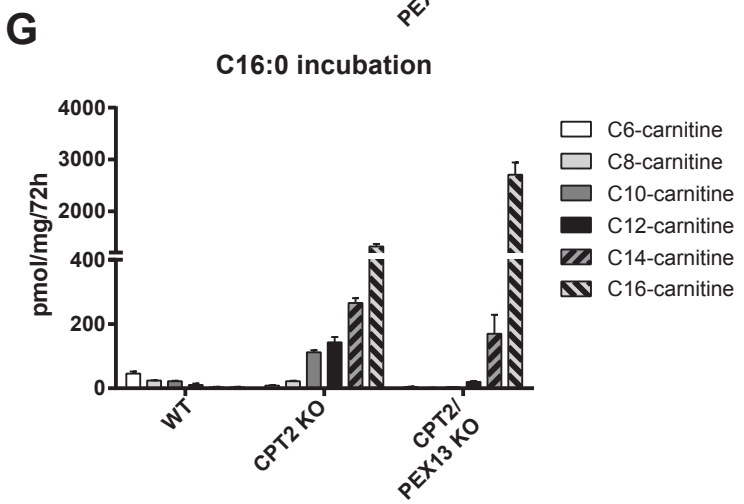


Figure S1. (A) The cell lines of the Human Protein Atlas have been analyzed by RNAseq to estimate the transcript abundance of each protein-encoding gene. We have reproduced the abundance as transcript per million (TPM) for all genes highlighted in this study. (B) Fluorescence microscopy of GFP-SKL in control and *PEX13* KO HEK-293 cells. (C) HSD17B4 immunoblot of 4 KO clones and 2 control HEK-293 samples. The HSD17B4 antibody recognizes the full length (79kD) and a proteolytically processed fragment (45kD; enoyl-CoA hydratase component). KO clones with fully deficient HSD17B4 (KO1 and KO2) were used for our studies. (D) ABCD3 immunoblot of one ABCD3 KO clone, one CPT2/ABCD3 double KO clone and 2 control clones. Each sample was analyzed in duplicate. The position of the molecular weight markers is indicated in kDa. Alpha Tubulin (α Tub) was used as a loading control. (E) Production of C6-, C8-, C10-and C12-carnitine in the extracellular medium of WT and *PEX13* KO clonal cell lines after loading with C12:0 in the presence of increasing concentrations of the CPT2 inhibitor L-AC. Data are means +/- SD of 2 or 4 independent observations. (F) Production of C6-, C8-, C10- and C12-carnitine in the extracellular medium of WT, *CPT2* KO and *CPT2*/*PEX13* double KO clonal cell lines after loading with C12:0. (G) Production of C6-, C8-, C10-, C12-, C14- and C16-carnitine in the extracellular medium of WT, *CPT2* KO and *CPT2*/*PEX13* double KO clonal cell lines after loading with C16:0.