

Table S4: Proteins and metabolites found differentially expressed in the comparison of INS-1E β cells treated with palmitate+GLP-1 vs cells treated with palmitate (grey lines when fold change ≥ 1.5).

Fold palm+GLP-1/palm	ID	Name	Function	Location
+2.44	P10860	Glutamate dehydrogenase 1	aminoacid metabolism	mito
+2.2	P81155	Voltage-dependent anion-selective channel protein 2	channels and transporter	mito
-1.23	P16036	Phosphate carrier protein	channels and transporter	mito
-1.14	Q9R1Z0	Voltage-dependent anion-selective channel protein 3	channels and transporter	mito
+1.30	Q9Z2L0	Voltage-dependent anion-selective channel protein 1	channels and transporter	mito
+1.69	Q05962	ADP/ATP translocase 1	channels and transporter	mito
-2.48	P21571	ATP synthase-coupling factor 6	krebs cycle/ATP production	mito
-1.46	P29419	ATP synthase subunit e	krebs cycle/ATP production	mito
-1.45	P04636	Malate dehydrogenase, mitochondrial	krebs cycle/ATP production	mito
-1.35	Q68FU3	Electron transfer flavoprotein subunit beta	krebs cycle/ATP production	mito
-1.28	P15999	ATP synthase subunit alpha	krebs cycle/ATP production	mito
-1.24	P62898	Cytochrome c, somatic	krebs cycle/ATP production	mito
-1.18	P10888	Cytochrome c oxidase subunit 4 isoform 1	krebs cycle/ATP production	mito
-1.18	P56574	Isocitrate dehydrogenase [NADP]	krebs cycle/ATP production	mito
-1.14	P13086	Succinyl-CoA ligase [ADP/GDP-forming] subunit alpha	krebs cycle/ATP production	mito
+1.12	P35171	Cytochrome c oxidase subunit 7A2	krebs cycle/ATP production	mito
+1.22	P10719	ATP synthase subunit beta	krebs cycle/ATP production	mito
+1.23	Q66HF1	NADH-ubiquinone oxidoreductase 75 kDa subunit	krebs cycle/ATP production	mito
+1.25	P00507	Glutamic-oxaloacetic transaminase 2	krebs cycle/ATP production	mito
+1.32	P11608	ATP synthase protein 8	krebs cycle/ATP production	mito
+1.37	P11240	Cytochrome c oxidase subunit 5A	krebs cycle/ATP production	mito
+1.41	Q99NA5	Isocitrate dehydrogenase [NAD] subunit alpha	krebs cycle/ATP production	mito
+1.49	P11507	Sarcoplasmic/endoplasmic reticulum calcium ATPase 2	krebs cycle/ATP production	mito
+1.61	Q06647	ATP synthase subunit O	krebs cycle/ATP production	mito
-1.34	Q60587	Trifunctional enzyme subunit beta	Lipid metabolism	mito
-1.12	Q9VVK7	Hydroxyacyl-coenzyme A dehydrogenase	Lipid metabolism	mito
+1.09	HMDB13130	Glutaryl carnitine	Lipid metabolism	mito

+1.11	HMDB00552	3-Methylglutaryl carnitine	Lipid metabolism	mito
+1.82	P07153	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit 1	metabolism/miscellaneous	mito
-1.29	P85834	Elongation factor Tu	mitochondrial protein processing	mito
-1.18	P67779	Prohibitin	mitochondrial protein processing	mito
-1.15	Q4FZT0	Stomatin-like protein 2	mitochondrial protein processing	mito
+1.19	Q5XIH7	Prohibitin-2	mitochondrial protein processing	mito
+1.45	Q5SGE0	Leucine-rich PPR motif-containing protein	other/unknown function	mito
-1.44	O35796	Complement component 1 Q subcomponent-binding protein	oxidative stress/apoptosis	mito
-1.22	Q9R063	Peroxiredoxin-5	oxidative stress/apoptosis	mito
-1.24	P63039	60 kDa heat shock protein	protein synthesis/translation regulation/protein folding/ER stress	mito
-1.22	P48721	Stress-70 protein	protein synthesis/translation regulation/protein folding/ER stress	mito
+1.37	P26772	10 kDa heat shock protein	protein synthesis/translation regulation/protein folding/ER stress	mito
+1.52	P0C2N5	Histone-lysine N-methyltransferase SUV420H1	epigenetic regulation	Nucleus
-1.58	P62804	Histone H4	other/unknown function	Nucleus
-1.53	A9UMV8	Histone H2A.J	other/unknown function	Nucleus
-1.45	A7VJC2	Heterogeneous nuclear ribonucleoproteins A2/B1	other/unknown function	Nucleus
-1.37	Q00715	Histone H2B type 1	other/unknown function	Nucleus
+1.41	P07340	Sodium/potassium-transporting ATPase subunit beta-1	channels and transporter	Plasma Membrane
+1.32	P21807	Peripherin	cytoskeleton related proteins	Plasma Membrane
+1.85	P70580	Membrane-associated progesterone receptor component 1	hormones/growth factors/receptors/neuropeptides	Plasma Membrane
+1.37	Q5PQS3	Ventricular zone-expressed PH domain-containing protein homolog 1	other/unknown function	Plasma Membrane
-1.3	P14562	Lysosome-associated membrane glycoprotein 1	Proteasoma/Lysosoma/Autophagy	Plasma Membrane
+1.14	P59215	Guanine nucleotide-binding protein G(o) subunit alpha	signal transduction	Plasma Membrane
+1.18	P04897	Guanine nucleotide-binding protein G(i) subunit alpha-2	signal transduction	Plasma Membrane
-1.43	Q8VHQ7	Synaptotagmin-like protein 4	vesicle transport/signal transduction	Plasma Membrane

+1.15	P54311	Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-1	vesicle transport/signal transduction	Plasma Membrane
+1.15	P54313	Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-2	vesicle transport/signal transduction	Plasma Membrane
+1.16	P63025	Vesicle-associated membrane protein 3	vesicle transport/signal transduction	Plasma Membrane
+1.23	Q9Z1X1	Extended synaptotagmin-1	vesicle transport/signal transduction	Plasma Membrane
+1.19	P60711	Actin, cytoplasmic 1	cytoskeleton related proteins	cyto
-2.18	P04797	Glyceraldehyde-3-phosphate dehydrogenase	glucose metabolism	cyto
-1.15	P16638	ATP-citrate synthase	Lipid metabolism	cyto
+1.20	Q62812	Myosin-9	other/unknown function	cyto
+1.22	Q5RJR8	Leucine-rich repeat-containing protein 59	other/unknown function	cyto
+1.61	Q68FR6	Elongation factor 1-gamma	other/unknown function	cyto
+1.41	P68255	14-3-3 protein theta	oxidative stress/apoptosis	cyto
+1.15	P62986	Ubiquitin-60S ribosomal protein L40	posttranslational modification/ubiquitination	cyto
-1.37	P62853	40S ribosomal protein S25	protein synthesis/translation regulation/protein folding/ER stress	cyto
+1.12	P62425	60S ribosomal protein L7a	protein synthesis/translation regulation/protein folding/ER stress	cyto
+1.16	P05197	Elongation factor 2	protein synthesis/translation regulation/protein folding/ER stress	cyto
+1.27	P05426	60S ribosomal protein L7	protein synthesis/translation regulation/protein folding/ER stress	cyto
+1.30	P23358	60S ribosomal protein L12	protein synthesis/translation regulation/protein folding/ER stress	cyto
+1.52	P34058	Heat shock protein HSP 90-beta	protein synthesis/translation regulation/protein folding/ER stress	cyto
+1.79	P41123	60S ribosomal protein L13	protein synthesis/translation regulation/protein folding/ER stress	cyto
+2.08	P17077	60S ribosomal protein L9	protein synthesis/translation regulation/protein folding/ER stress	cyto
+1.18	P38406	Guanine nucleotide-binding protein G(olf) subunit alpha	signal transduction	cyto
-1.18	P09527	Ras-related protein Rab-7a	vesicle transport/signal transduction	cyto
-1.13	P10536	Ras-related protein Rab-1B	vesicle transport/signal transduction	cyto
+1.11	P61107	Ras-related protein Rab-14	vesicle transport/signal transduction	cyto
+1.14	P60881	Synaptosomal-associated protein 25	vesicle transport/signal transduction	cyto

+1.41	Q62636	Ras-related protein Rap-1b	vescicle transport/signal transduction	cyto
+1.92	Q9JK11	Reticulon-4	other/unknown function	ER
-1.27	P04785	Protein disulfide-isomerase	posttranslational modification/ubiquitination	ER
-1.39	P18418	Calreticulin	protein synthesis/translation regulation/protein folding/ER stress	ER
-1.23	P52555	Endoplasmic reticulum resident protein 29	protein synthesis/translation regulation/protein folding/ER stress	ER
-1.21	P06761	78 kDa glucose-regulated protein	protein synthesis/translation regulation/protein folding/ER stress	ER
-1.2	Q63081	Protein disulfide-isomerase A6	protein synthesis/translation regulation/protein folding/ER stress	ER
-1.19	Q63617	Hypoxia up-regulated protein 1	protein synthesis/translation regulation/protein folding/ER stress	ER
-1.15	Q66HD0	Endoplasmin	protein synthesis/translation regulation/protein folding/ER stress	ER
+1.47	P35565	Calnexin	protein synthesis/translation regulation/protein folding/ER stress	ER
-1.41	P01322	Insulin-1	hormones/growth factors/receptors/neuropeptides	Extracellular Space
-1.34	P01323	Insulin-2	hormones/growth factors/receptors/neuropeptides	Extracellular Space
-1.35	O35547	Long-chain-fatty-acid--CoA ligase 4	Lipid metabolism	Extracellular Space
+1.15	P63018	Heat shock cognate 71 kDa protein	protein synthesis/translation regulation/protein folding/ER stress	other
-1.18	HMDB00062	L-carnitine	aminoacid metabolism	other
-1.11	HMDB00123	Glycine	aminoacid metabolism	other
-1.08	HMDB00517	L-Arginine	aminoacid metabolism	other
+1.02	HMDB00161	L-Alanine	aminoacid metabolism	other
+1.07	HMDB00162	L-Proline	aminoacid metabolism	other
+1.11	HMDB00177	L-Histidine	aminoacid metabolism	other
+1.14	HMDB00148	L-Glutamic acid	aminoacid metabolism	other
+1.16	HMDB00167	L-Threonine	aminoacid metabolism	other
+1.17	HMDB00159	L-Phenylalanine	aminoacid metabolism	other
+1.18	HMDB00883	L-Valine	aminoacid metabolism	other
+1.19	HMDB00182	L-Lysine	aminoacid metabolism	other
+1.19	HMDB00687	L-Leucine	aminoacid metabolism	other
+1.20	HMDB00191	L-Aspartic Acid	aminoacid metabolism	other

+1.21	HMDB00696	L-Methionine	aminoacid metabolism	other
+1.24	HMDB00187	L-Serine	aminoacid metabolism	other
+1.34	HMDB00158	L-Tyrosine	aminoacid metabolism	other
+1.38	HMDB00214	Ornithine	aminoacid metabolism	other
+1.47	HMDB00168	L-Asparagine	aminoacid metabolism	other
