

Supplemental Table 2. Cardiac mitochondrial proteins identified showing a significant ($p < 0.05$) difference between groups. 114 = IMF mitochondria isolated from sedentary animals; 115 = IMF mitochondria isolated from exercise trained animals; 116 = SS mitochondria isolated from sedentary animals; 117 = SS mitochondria isolated from exercise trained animals. The number of spectrum used for quantification of each protein in each replicate is also indicated.

Accession #	Protein Name	Rep 1							Rep 2						
		# Q spectrum	116/114	P value	115/114	P value	117/116	P value	# Q spectrum	116/114	P value	115/114	P value	117/116	P value
IPI00201413	Acaa2 3-ketoacyl-CoA thiolase, mitochondrial	6	---	---	1.86	4.2E-02	---	---	6	1.60	2.5E-02	---	---	---	---
IPI00211225	Acadl Long-chain specific acyl-CoA dehydrogenase, mitochondrial precursor	16	---	---	1.81	7.7E-06	-1.29	4.1E-05	23	---	---	1.30	2.4E-03	---	---
IPI00205018	Aldh6a1 Methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial precursor	6	---	---	---	---	1.33	1.7E-02	9	---	---	1.34	2.2E-02	1.29	5.4E-03
IPI00195123	Atp5o ATP synthase O subunit, mitochondrial precursor	47	---	---	---	---	---	---	41	---	---	-1.32	2.1E-02	---	---
IPI00372027	Chchd3_predicted similar to coiled-coil-helix-coiled-coil-helix domain containing 3	4	---	---	-2.27	3.8E-03	---	---	5	2.03	3.8E-02	-2.40	2.6E-02	---	---
IPI00206977	Cs Citrate synthase, mitochondrial precursor	12	---	---	1.71	3.7E-03	---	---	15	---	---	1.50	1.6E-02	1.29	4.3E-04
IPI00765153	Dlat similar to dihydroliipoamide S-acetyltransferase	15	1.99	1.4E-02	---	---	-1.51	4.1E-06	12	---	---	---	---	---	---
IPI00551702	Dlst Dihydroliipoalysine-residue succinyltransferase component of 2-oxoglutarate dehydrogenase complex, mitochondrial precursor	8	1.71	7.1E-03	---	---	-1.43	2.6E-05	8	---	---	---	---	---	---
IPI00326561	Ech1 Delta(3,5)-Delta(2,4)-dienoyl-CoA isomerase, mitochondrial precursor	3	---	---	2.31	2.1E-04	---	---	3	---	---	2.00	6.9E-03	1.39	7.9E-03
IPI00210920	Got2 Aspartate aminotransferase, mitochondrial precursor	14	-1.24	9.4E-03	---	---	1.15	3.5E-02	16	---	---	1.39	3.5E-02	1.24	1.7E-03
IPI00212622	Hadha Trifunctional enzyme subunit alpha, mitochondrial precursor	22	1.67	4.9E-02	---	---	1.27	8.6E-05	30	1.80	6.3E-03	---	---	1.21	4.4E-04
IPI00205157	Hadhsc Hydroxyacyl-coenzyme A dehydrogenase, mitochondrial precursor	6	-1.35	7.2E-03	1.51	9.6E-03	---	---	4	-1.45	4.2E-02	---	---	---	---
IPI00363265	Hspa9a_predicted Stress-70 protein, mitochondrial precursor	11	1.72	2.2E-02	---	---	---	---	10	1.57	4.9E-02	---	---	---	---
IPI00193716	Ivd Isovaleryl-CoA dehydrogenase, mitochondrial precursor	6	-1.46	1.1E-03	2.09	1.3E-03	---	---	5	-2.07	2.4E-03	---	---	---	---
IPI00215093	LOC360975 2-oxoglutarate dehydrogenase E1 component, mitochondrial precursor	23	1.71	4.0E-04	---	---	-1.41	2.5E-07	25	1.37	1.5E-02	---	---	---	---
IPI00202238	LOC681867;LOC681418 similar to NADH-ubiquinone oxidoreductase PDSW subunit (Complex I-PDSW) (CI-PDSW) isoform 1	11	-1.35	1.7E-02	---	---	1.18	1.4E-02	9	---	---	---	---	---	---
IPI00362298	LOC690675;LOC684936 similar to Cytochrome c, somatic	16	-1.61	1.4E-04	---	---	---	---	16	-1.30	5.6E-05	---	---	1.21	9.7E-03
IPI00202370	Maoa similar to Amine oxidase [flavin-containing] A	20	---	---	-4.14	5.4E-07	-3.58	2.9E-15	14	---	---	-2.83	2.7E-07	-1.10	3.3E-02
IPI00197696	Mdh2 Malate dehydrogenase, mitochondrial precursor	26	---	---	---	---	---	---	28	-1.41	6.6E-04	---	---	---	---
IPI00231997	Ndufa5 NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 5	10	---	---	---	---	1.13	3.5E-02	8	---	---	---	---	---	---
IPI00204118	Pdcd8 Apoptosis-inducing factor 1, mitochondrial precursor	7	2.30	8.3E-03	---	---	---	---	8	2.19	8.6E-04	---	---	---	---
IPI00208215	Prdx3 Thioredoxin-dependent peroxide reductase, mitochondrial precursor	4	---	---	---	---	---	---	4	---	---	1.32	2.1E-02	1.40	1.2E-02

Accession #	Protein Name	Rep 3							Rep 4						
		# Q spectrum	116/114	P value	115/114	P value	117/116	P value	# Q spectrum	116/114	P value	115/114	P value	117/116	P value
IPI00201413	Acaa2 3-ketoacyl-CoA thiolase, mitochondrial	7	1.85	2.2E-05	---	---	---	---	7	---	---	---	---	-1.28	8.0E-03
IPI00211225	Acadl Long-chain specific acyl-CoA dehydrogenase, mitochondrial precursor	20	---	---	1.53	2.6E-05	-1.15	2.0E-02	18	---	---	---	---	-1.36	3.8E-04
IPI00205018	Aldh6a1 Methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial precursor	5	---	---	1.56	1.1E-02	1.40	1.5E-02	4	---	---	---	---	---	---
IPI00195123	Atp5o ATP synthase O subunit, mitochondrial precursor	29	---	---	-1.56	2.4E-02	---	---	34	---	---	-1.39	1.2E-02	---	---
IPI00372027	Chchd3_predicted similar to coiled-coil-helix-coiled-coil-helix domain containing 3	2	---	---	---	---	---	---	2	---	---	---	---	---	---
IPI00206977	Cs Citrate synthase, mitochondrial precursor	7	---	---	1.68	1.8E-03	---	---	9	---	---	1.39	3.5E-02	---	---
IPI00765153	Dlat similar to dihydrolipoamide S-acetyltransferase	7	2.25	4.3E-03	---	---	---	---	11	---	---	---	---	---	---
IPI00551702	Dlst Dihydrolipoyllysine-residue succinyltransferase component of 2-oxoglutarate dehydrogenase complex, mitochondrial precursor	5	1.88	1.4E-02	---	---	---	---	4	---	---	---	---	---	---
IPI00326561	Ech1 Delta(3,5)-Delta(2,4)-dienoyl-CoA isomerase, mitochondrial precursor	0	---	---	---	---	---	---	2	---	---	---	---	---	---
IPI00210920	Got2 Aspartate aminotransferase, mitochondrial precursor	9	---	---	---	---	---	---	11	---	---	1.46	3.3E-02	---	---
IPI00212622	Hadha Trifunctional enzyme subunit alpha, mitochondrial precursor	19	1.79	1.3E-02	-1.60	2.5E-02	---	---	21	---	---	-1.45	2.3E-02	1.17	4.0E-02
IPI00205157	Hadhsc Hydroxyacyl-coenzyme A dehydrogenase, mitochondrial precursor	3	---	---	1.94	3.3E-03	-1.20	1.3E-02	3	---	---	---	---	---	---
IPI00363265	Hspa9a_predicted Stress-70 protein, mitochondrial precursor	8	2.06	1.3E-02	---	---	---	---	10	1.36	4.3E-02	---	---	---	---
IPI00193716	Ivd Isovaleryl-CoA dehydrogenase, mitochondrial precursor	0	---	---	---	---	---	---	3	-2.90	8.5E-03	---	---	---	---
IPI00215093	LOC360975 2-oxoglutarate dehydrogenase E1 component, mitochondrial precursor	18	1.87	1.6E-03	---	---	---	---	19	1.42	2.7E-02	---	---	---	---
IPI00202238	LOC681867;LOC681418 similar to NADH-ubiquinone oxidoreductase PDSW subunit (Complex I-PDSW) (CI-PDSW) isoform 1	7	-1.64	5.5E-03	---	---	1.40	5.4E-03	12	-1.39	4.1E-02	---	---	---	---
IPI00362298	LOC690675;LOC684936 similar to Cytochrome c, somatic	9	---	---	1.58	7.2E-03	---	---	26	---	---	---	---	1.24	1.2E-06
IPI00202370	Maoa similar to Amine oxidase [flavin-containing] A	8	---	---	1.66	3.1E-03	---	---	19	---	---	---	---	-1.34	1.4E-05
IPI00197696	Mdh2 Malate dehydrogenase, mitochondrial precursor	19	---	---	1.66	5.5E-03	---	---	22	---	---	1.29	2.7E-02	---	---
IPI00231997	Ndufa5 NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 5	3	-1.77	7.6E-03	---	---	1.48	1.9E-02	7	-1.71	4.2E-02	---	---	1.36	4.1E-02
IPI00204118	Pdcd8 Apoptosis-inducing factor 1, mitochondrial precursor	6	---	---	---	---	---	---	5	---	---	---	---	---	---
IPI00208215	Prdx3 Thioredoxin-dependent peroxide reductase, mitochondrial precursor	3	---	---	---	---	1.40	7.2E-03	3	---	---	---	---	---	---