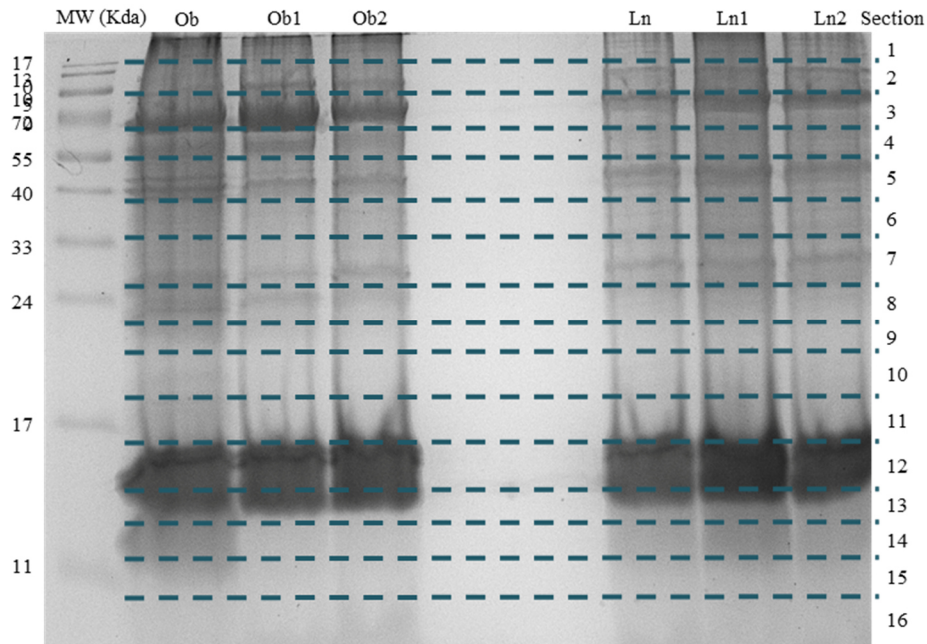


Supplemental Material

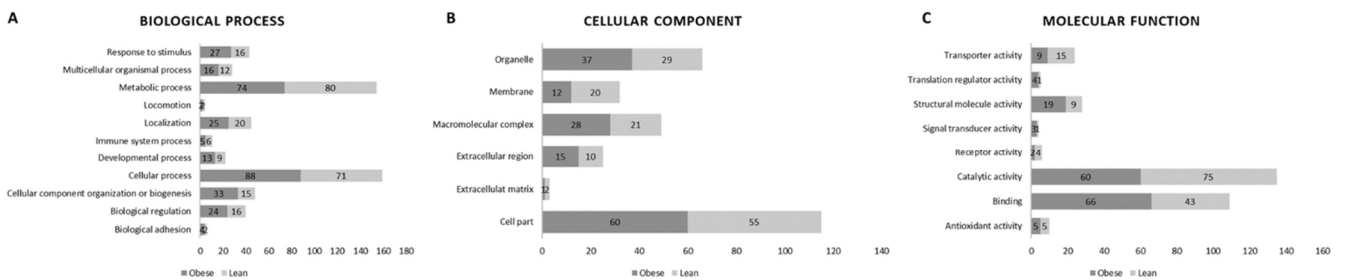
Fat Quality Matters: Distinct Proteomic Signatures Between Lean and Obese Cardiac Visceral Adipose Tissue Underlie its Differential Myocardial Impact

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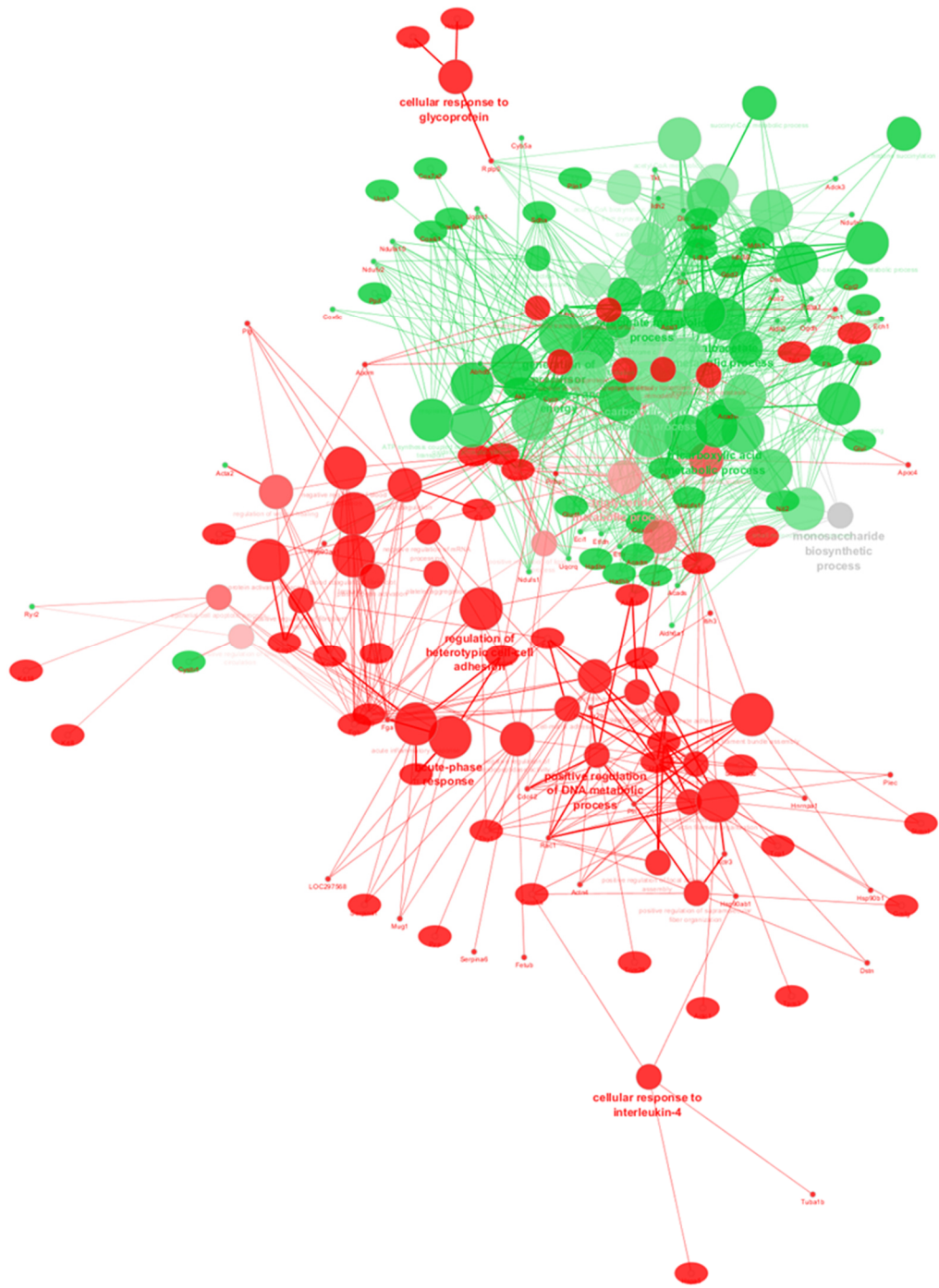
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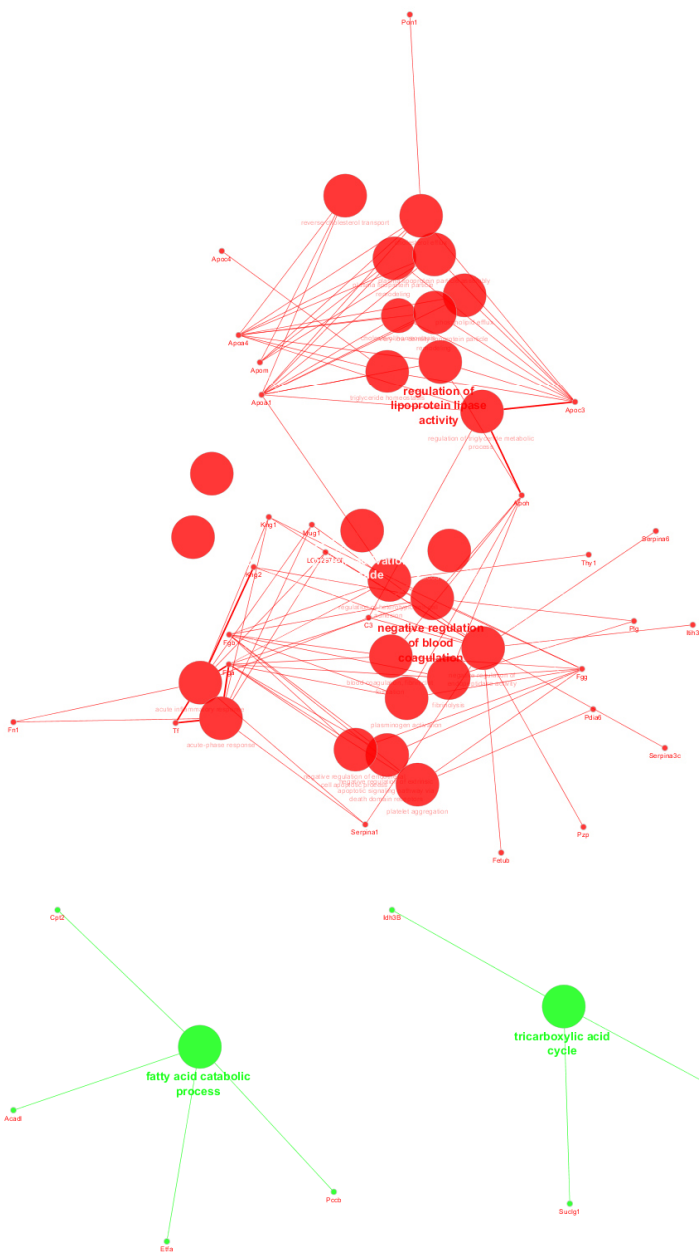
Supplemental figure 1 - Representation of the Sodium dodecylsulphate-polyacrylamide gel electrophoresis of cardiac visceral adipose tissue of the obese and lean ZSF1 rats. Ln – lean ZSF1 rat; Ob – obese ZSF1 rat; MW – molecular weight; OD – Optical density.



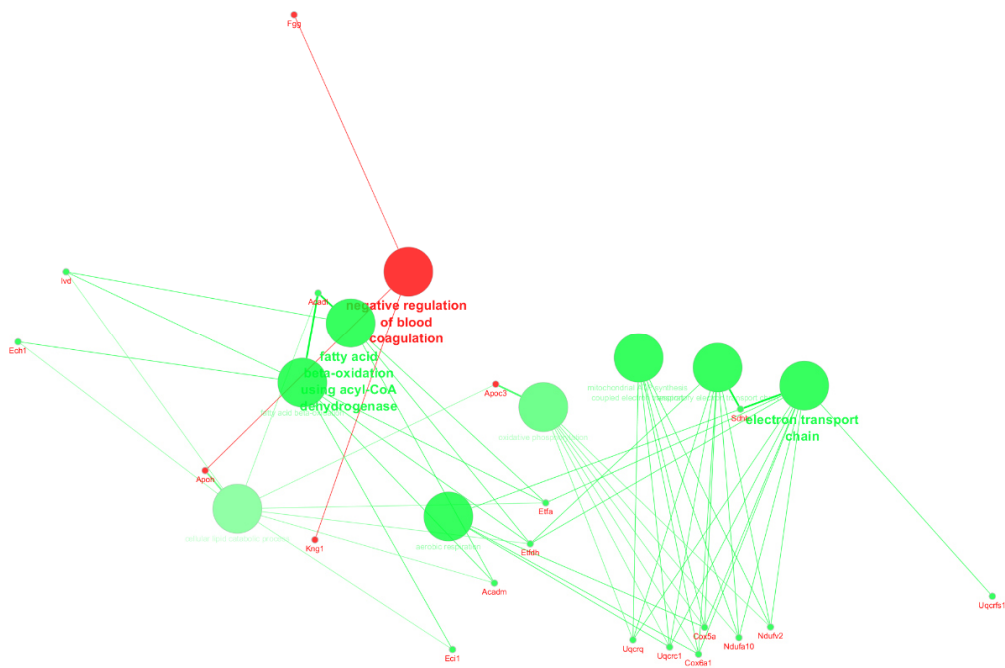
Supplemental figure 2 – Annotation per gene ontology term obtained with the PANTHER classification system. Bar chart of biological process GO term annotations (A), cellular component GO term annotations (B) and molecular function GO term annotations (C).



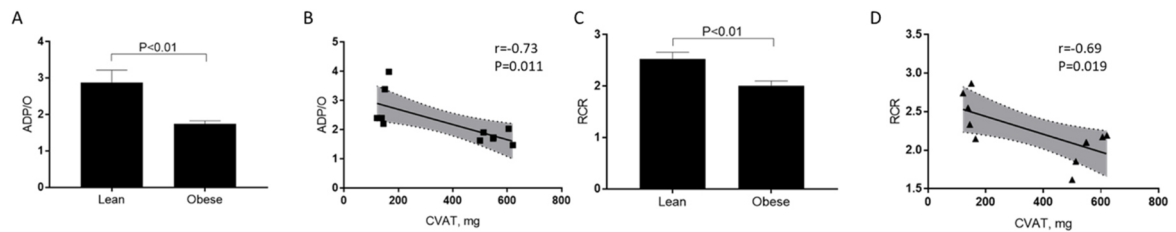
Supplemental figure 3 - Network analysis presenting protein-protein interaction considering unique and common proteins significantly different between CVAT from lean and obese ZSF1 (based on emPAI values). Red nodes – Biological processes regulated in obese subjects; Green nodes – Biological processes regulated in lean subjects.



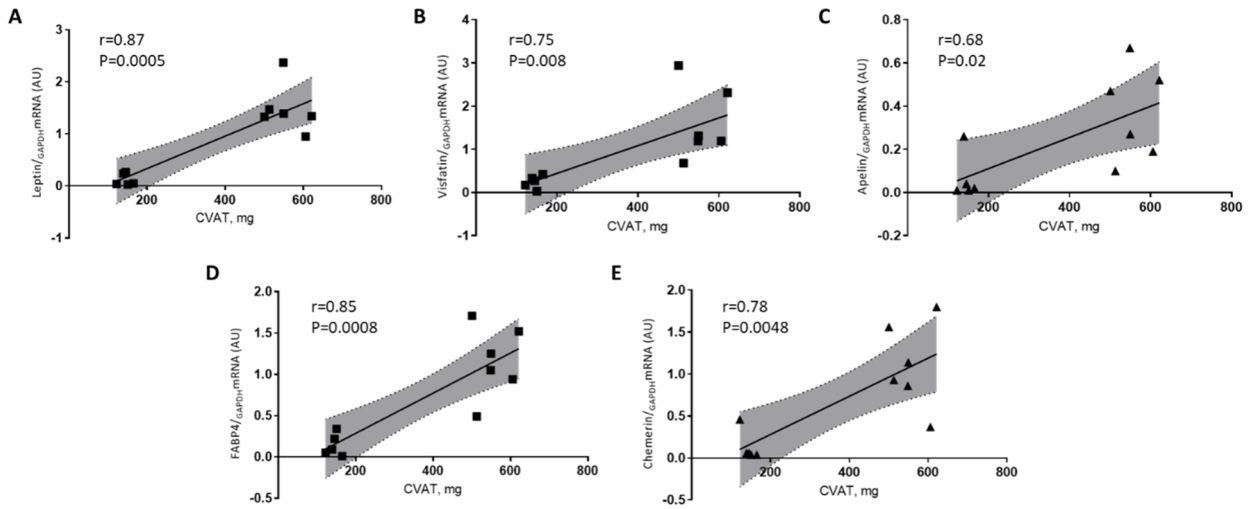
Supplemental figure 4 - Network analysis presenting protein-protein interaction considering unique and common proteins with prediction of classically secreted proteins in CVAT of obese and lean rats. Red nodes – biological processes regulated in obese subjects; Green nodes – biological processes regulated in lean subjects.



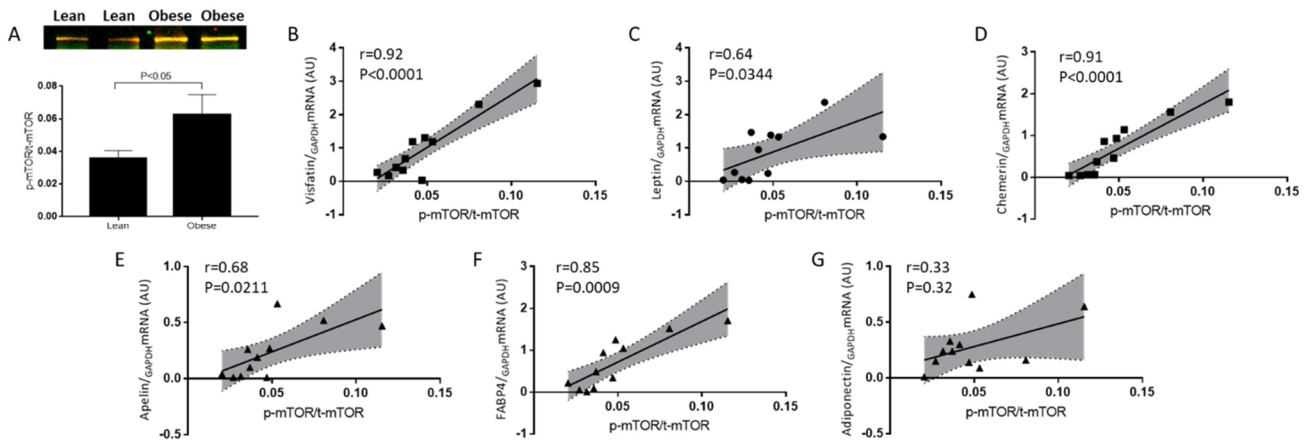
Supplemental figure 5 - Network analysis presenting protein-protein interaction considering unique and common proteins with prediction of non-classically secreted proteins in CVAT of obese and lean rats. Red nodes – biological processes regulated in obese subjects; Green nodes – biological processes regulated in lean subjects.



Supplemental figure 6 – LV mitochondrial function and correlations with CVAT weight.



Supplemental figure 7 – Correlations between CVAT weight and gene expression of adipokines.



Supplemental figure 8 - Ratio of phosphorylated to total mammalian target of rapamycin (mTOR) in LV from lean and obese ZSF1. Correlations between mTOR activity and gene expression of adipokines. The values are given as means \pm SEM. n = 6-8 animals per group.

Supplemental Table 1 - Proteins of cardiac visceral adipose tissue extracted

Protein name	Gene name	Entry name	Acession number	Mascot score	Matching peptides	Sequence coverage
14-3-3 protein beta/alpha	Ywhab	1433B_RAT	P35213	27	2 (1)	2 (1)
14-3-3 protein gamma	Ywhag	1433G_RAT	P61983	32	3 (2)	2 (2)
14-3-3 protein theta	Ywhaq	1433T_RAT	P68255	55	4 (2)	4 (2)
14-3-3 protein zeta/delta	Ywhaz	1433Z_RAT	P63102	69	2 (2)	2 (2)
Alpha-1-antitrypsin	Serpina1	A1AT_RAT	P17475	70	3 (3)	3 (3)
Alpha-1-inhibitor 3	A1i3	A1I3_RAT	P14046	182	8 (6)	8 (6)
Alpha-1-macroglobulin	A1m	A1M_RAT	Q63041	167	11 (4)	10 (4)
1-acylglycerol-3-phosphate O-acyltransferase ABHD5	Abhd5	ABHD5_RAT	Q6QA69	51	4 (1)	3 (1)
Long-chain specific acyl-CoA dehydrogenase, mitochondrial	Acadl	ACADL_RAT	P15650	50	3 (1)	3 (1)
Medium-chain specific acyl-CoA dehydrogenase, mitochondrial	Acadm	ACADM_RAT	P08503	209	11 (7)	7 (5)
Short-chain specific acyl-CoA dehydrogenase, mitochondrial	Acads	ACADS_RAT	P15651	75	4 (1)	3 (1)
Very long-chain specific acyl-CoA dehydrogenase, mitochondrial	Acadvl	ACADV_RAT	P45953	461	13 (11)	10 (9)
Aconitate hydratase, mitochondrial	Aco2	ACON_RAT	Q9ER34	514	27 (17)	19 (16)
Acyl-coenzyme A thioesterase 2, mitochondrial	Acot2	ACOT2_RAT	O55171	25	6 (1)	5 (1)
Long-chain-fatty-acid--CoA ligase 1	Acsl1	ACSL1_RAT	P18163	280	17 (11)	5 (4)
Actin, aortic smooth muscle	Acta2	ACTA_RAT	P62738	160	5 (5)	5 (5)
Actin, cytoplasmic 1	Actb	ACTB_RAT	P60711	34	4 (1)	4 (1)
Actin, alpha cardiac muscle 1	Actc1	ACTC_RAT	P68035	552	24 (17)	18 (13)
Alpha-actinin-4	Actn4	ACTN4_RAT	Q9QXQ0	61	4 (1)	4 (1)
Chaperone activity of bc1 complex-like, mitochondrial	Coq8a	COQ8A_RAT	Q5BJQ0	52	5 (1)	4 (1)
ADP/ATP translocase 2	Slc25a5	ADT2_RAT	Q09073	46	7 (1)	4 (1)
Serum albumin	Alb	ALBU_RAT	P02770	381	16 (12)	11 (9)
Aldehyde dehydrogenase, mitochondrial	Aldh2	ALDH2_RAT	P11884	1804	54 (43)	25 (21)
Fructose-bisphosphate aldolase A	Aldoa	ALDOA_RAT	P05065	35	4 (2)	4 (2)
Aldose reductase	Akr1b1	ALDR_RAT	P07943	1398	54 (36)	27 (20)
Alpha-methylacyl-CoA racemase	Amacr	AMACR_RAT	P70473	23	5 (1)	4 (1)
Pancreatic alpha-amylase	Amy2	AMYP_RAT	P00689	68	2 (1)	2 (1)
Annexin A1	Anxa1	ANXA1_RAT	P07150	377	15 (10)	11 (8)
Annexin A2	Anxa2	ANXA2_RAT	Q07936	27	4 (1)	1 (1)
Annexin A4	Anxa4	ANXA4_RAT	P55260	404	17 (14)	14 (12)
Annexin A5	Anxa5	ANXA5_RAT	P14668	280	11 (8)	7 (6)
Annexin A6	Anxa6	ANXA6_RAT	P48037	32	4 (1)	4 (1)
Membrane primary amine oxidase	Aoc3	AOC3_RAT	O08590	190	7 (7)	7 (7)
Apolipoprotein A-I	Apoa1	APOA1_RAT	P04639	62	6 (3)	3 (2)
Apolipoprotein A-IV	Apoa4	APOA4_RAT	P02651	143	9 (6)	7 (6)
Apolipoprotein C-III	Apoc3	APOC3_RAT	P06759	103	2 (2)	2 (2)
Apolipoprotein C-IV	Apoc4	APOC4_RAT	P55797	77	1 (1)	1 (1)
Apolipoprotein E	ApoE	APOE_RAT	P02650	111	8 (5)	7 (5)
Beta-2-glycoprotein 1	Apoh	APOH_RAT	P26644	32	4 (2)	4 (2)
Apolipoprotein M	Apom	APOM_RAT	P14630	24	2 (1)	2 (1)
Actin-related protein 3	Actr3	ARP3_RAT	Q4V7C7	49	4 (1)	4 (1)
ATP synthase subunit alpha, mitochondrial	Atp5a1	ATPA_RAT	P15999	61	4 (3)	4 (3)
ATP synthase subunit beta, mitochondrial	Atp5b	ATPB_RAT	P10719	37	8 (2)	4 (2)
Beta-2-microglobulin	B2m	B2MG_RAT	P07151	36	1 (1)	1 (1)
Cadherin-23	Cdh23	CAD23_RAT	P58365	28	7 (1)	7 (1)
Carbonic anhydrase 1	Ca1	CAH1_RAT	B0BNN3	521	11 (11)	9 (9)
Carbonic anhydrase 2	Ca2	CAH2_RAT	P27139	47	11 (1)	7 (1)
Carbonic anhydrase 3	Ca3	CAH3_RAT	P14141	49	4 (1)	3 (1)

Calmodulin	Calm	CALM_RAT	P62161	192 4 (4)	3 (3)
Calreticulin	Calr	CALR_RAT	P18418	204 6 (5)	6 (5)
Calnexin	Canx	CALX_RAT	P35565	86 4 (3)	3 (2)
Catalase	Cat	CATA_RAT	P04762	159 8 (5)	8 (5)
Corticosteroid-binding globulin	Serpina6	CBG_RAT	P31211	27 2 (1)	2 (1)
Cell division control protein 42 homolog	Cdc42	CDC42_RAT	Q8CFN2	73 1 (1)	1 (1)
Ceruloplasmin	Cp	CERU_RAT	P13635	28 14 (1)	13 (1)
10 kDa heat shock protein, mitochondrial	Hspe1	CH10_RAT	P26772	80 6 (2)	5 (2)
60 kDa heat shock protein, mitochondrial	Hspd1	CH60_RAT	P63039	96 6 (3)	6 (3)
Citrate synthase, mitochondrial	Cs	CISY_RAT	Q8VHF5	66 6 (4)	5 (4)
Chloride intracellular channel protein 1	Clic1	CLIC1_RAT	Q6MG61	65 3 (2)	3 (2)
Cysteinyl leukotriene receptor 1	Cysltr1	CLTR1_RAT	Q924T8	20 3 (1)	2 (1)
Collagen alpha-1(I) chain	Col1a1	CO1A1_RAT	P02454	48 6 (2)	6 (2)
Collagen alpha-2(I) chain	Col1a2	CO1A2_RAT	P02466	105 6 (2)	5 (2)
Complement C3	C3	CO3_RAT	P01026	134 18 (7)	16 (7)
Complement C4	C4	CO4_RAT	P08649	48 10 (2)	5 (1)
Cofilin-1	Cfl1	COF1_RAT	P45592	149 4 (3)	3 (3)
Ubiquinone biosynthesis protein COQ9, mitochondrial	Coq9	COQ9_RAT	Q68FT1	307 5 (4)	3 (2)
Coronin-1A	Coro1a	COR1A_RAT	Q91ZN1	36 8 (1)	4 (1)
Cytochrome c oxidase subunit 4 isoform 1, mitochondrial	Cox4i1	COX41_RAT	P10888	87 4 (4)	3 (3)
Cytochrome c oxidase subunit 5A, mitochondrial	Cox5a	COX5A_RAT	P11240	91 6 (3)	4 (3)
Cytochrome c oxidase subunit 5B, mitochondrial	Cox5b	COX5B_RAT	P12075	53 2 (2)	2 (2)
Carnitine O-palmitoyltransferase 2, mitochondrial	Cpt2	CPT2_RAT	P18886	116 5 (4)	4 (3)
Cytochrome c oxidase subunit 6A1, mitochondrial	Cox6a1	CX6A1_RAT	P10818	92 2 (2)	1 (1)
Cytochrome c oxidase subunit 6C-2	Cox6c2	CX6C2_RAT	P11951	59 6 (4)	3 (2)
Cytochrome c oxidase subunit 7A2, mitochondrial	Cox7a2	CX7A2_RAT	P35171	43 3 (1)	2 (1)
Cytochrome b5	Cyb5a	CYB5_RAT	P00173	98 9 (3)	7 (2)
Cytochrome c, somatic	Cycc	CYC_RAT	P62898	68 2 (1)	2 (1)
2,4-dienoyl-CoA reductase, mitochondrial	Decr1	DECR_RAT	Q64591	168 3 (2)	2 (1)
Destrin	Dstn	DEST_RAT	Q7M0E3	94 7 (3)	6 (3)
Glutamate dehydrogenase 1, mitochondrial	Glud1	DHE3_RAT	P10860	44 3 (1)	3 (1)
Succinate dehydrogenase [ubiquinone] flavoprotein subunit, mitochondrial	Sdha	SDHA_RAT	Q920L2	397 10 (8)	8 (7)
Succinate dehydrogenase [ubiquinone] iron-sulfur subunit, mitochondrial	Sdhb	DHSB_RAT	P21913	36 2 (1)	2 (1)
Dihydrolipoyl dehydrogenase, mitochondrial	Dld	DLDH_RAT	Q6P6R2	153 6 (5)	5 (4)
D-dopachrome decarboxylase	Ddt	DOPD_RAT	P80254	46 1 (1)	1 (1)
Delta(3,5)-Delta(2,4)-dienoyl-CoA isomerase, mitochondrial	Ech1	ECH1_RAT	Q62651	62 4 (1)	4 (1)
Trifunctional enzyme subunit alpha, mitochondrial	Hadha	ECHA_RAT	Q64428	701 20 (15)	14 (9)
Trifunctional enzyme subunit beta, mitochondrial	Hadhb	ECHB_RAT	Q60587	153 15 (7)	7 (4)
Enoyl-CoA hydratase, mitochondrial	Echs1	ECHM_RAT	P14604	211 7 (5)	6 (4)
Enoyl-CoA delta isomerase 1, mitochondrial	Eci1	ECI1_RAT	P23965	122 4 (3)	4 (3)
Elongation factor 1-alpha 1	Eef1a1	EF1A1_RAT	P62630	51 1 (1)	1 (1)
Elongation factor 2	Eef2	EF2_RAT	P05197	40 8 (3)	5 (3)
Elongation factor Tu, mitochondrial	Tufm	EFTU_RAT	P85834	90 6 (3)	5 (3)
EH domain-containing protein 2	Ehd2	EHD2_RAT	Q4V8H8	278 16 (7)	12 (4)
Eukaryotic translation initiation factor 3 subunit A	Eif3a	EIF3A_RAT	Q1JU68	21 11 (1)	11 (1)
Alpha-enolase	Eno1	ENOA_RAT	P04764	36 4 (1)	3 (1)
Endoplasmic reticulum resident protein 29	Hsp90b1	ENPL_RAT	Q66HD0	136 10 (5)	6 (4)
Electron transfer flavoprotein subunit alpha, mitochondrial	Erp29	ERP29_RAT	P52555	171 5 (4)	5 (4)
Electron transfer flavoprotein subunit beta	Etfa	ETFA_RAT	P13803	348 10 (8)	8 (7)
Electron transfer flavoprotein-ubiquinone oxidoreductase, mitochondrial	Etfb	ETFB_RAT	Q68FU3	255 5 (5)	3 (3)
Fatty acid-binding protein, adipocyte	Etfdh	ETFD_RAT	Q6UPE1	114 8 (3)	3 (1)
	Fabp4	FABP4_RAT	P70623	39 8 (1)	7 (1)

Alpha-2-HS-glycoprotein	Ahsg	FETUA_RAT	P24090	162 4 (2)	3 (2)
Fetuin-B	Fetub	FETUB_RAT	Q9QX79	88 3 (1)	3 (1)
Fibrinogen alpha chain	Fga	FIBA_RAT	P06399	351 17 (10)	11 (7)
Fibrinogen beta chain	Fgb	FIBB_RAT	P14480	1348 43 (34)	15 (13)
Fibrinogen gamma chain	Fgg	FIBG_RAT	P02680	735 24 (20)	15 (13)
Fibronectin	Fn1	FINC_RAT	P04937	166 10 (6)	6 (5)
Ferritin heavy chain	Fth1	FRIH_RAT	P19132	70 3 (2)	3 (2)
Ferritin light chain 1	Ftl1	FRIL1_RAT	P02793	60 4 (2)	4 (2)
Far upstream element-binding protein 1	Fubp1	FUBP1_RAT	Q32PX7	34 3 (1)	3 (1)
Fumarate hydratase, mitochondrial	Fh	FUMH_RAT	P14408	424 14 (7)	8 (4)
Rab GDP dissociation inhibitor beta	Gdi2	GDIB_RAT	P50399	37 5 (1)	4 (1)
Rho GDP-dissociation inhibitor 1	Arhgdia	GDIR1_RAT	Q5XI73	129 3 (3)	3 (3)
Gelsolin	Gsn	GELS_RAT	Q68FP1	184 22 (8)	19 (8)
Glutamine synthetase	Glul	GLNA_RAT	P09606	65 4 (3)	4 (3)
Glia maturation factor gamma	Gmfg	GMFG_RAT	Q80T18	26 1 (1)	1 (1)
Guanine nucleotide-binding protein G(i) subunit alpha-2	Gnai2	GNAI2_RAT	P04897	53 2 (1)	2 (1)
Golgi reassembly-stacking protein 1	Goraspl1	GORS1_RAT	O35254	28 2 (1)	2 (1)
Glycerol-3-phosphate dehydrogenase [NAD(+)], cytoplasmic	Gpd1	GPDA_RAT	O35077	25 4 (1)	4 (1)
Glycerol-3-phosphate dehydrogenase, mitochondrial	Gpd2	GPDM_RAT	P35571	56 5 (1)	5 (1)
Glutathione peroxidase 3	Gpx3	GPX3_RAT	P23764	44 2 (1)	2 (1)
Stress-70 protein, mitochondrial	Hspa9	GRP75_RAT	P48721	346 23 (14)	14 (8)
78 kDa glucose-regulated protein	Hspa5	GRP78_RAT	P06761	32 1 (1)	1 (1)
Glutathione S-transferase alpha-1	Gsta1	GSTA1_RAT	P00502	62 2 (1)	2 (1)
Glutathione S-transferase P	Gstp1	GSTP1_RAT	P04906	34 3 (1)	3 (1)
Histone H2A type 1-C	N/A	H2A1C_RAT	POC169	72 3 (2)	3 (2)
Histone H2B type 1	N/A	H2B1_RAT	Q00715	67 2 (2)	1 (1)
Histone H3.3	H3f3b	H33_RAT	P84245	48 5 (1)	3 (1)
Histone H4	Hist1h4b	H4_RAT	P62804	365 12 (9)	12 (9)
Hemoglobin subunit alpha-1/2	Hba1	HBA_RAT	P01946	1099 19 (17)	7 (6)
Hemoglobin subunit beta-1	Hbb	HBB1_RAT	P02091	1315 27 (25)	9 (8)
Hemoglobin subunit beta-2	N/A	HBB2_RAT	P11517	1459 31 (30)	8 (8)
Hydroxyacyl-coenzyme A dehydrogenase, mitochondrial	Hadh	HCDH_RAT	Q9WVK7	41 2 (1)	2 (1)
Hemopexin	Hpx	HEMO_RAT	P20059	69 5 (2)	5 (2)
High mobility group protein B2	Hmgb2	HMGB2_RAT	P52925	128 5 (2)	4 (2)
Heterogeneous nuclear ribonucleoprotein F	Hnrnpf	HNRPF_RAT	Q794E4	63 3 (2)	3 (2)
Heterogeneous nuclear ribonucleoprotein K	Hnrnpk	HNRPK_RAT	P61980	87 9 (3)	6 (3)
Heterogeneous nuclear ribonucleoprotein M	Hnrnmp	HNRPM_RAT	Q62826	62 3 (1)	3 (1)
Heat shock protein HSP 90-alpha	Hsp90aa1	HS90A_RAT	P82995	64 5 (2)	4 (2)
Heat shock protein HSP 90-beta	Hsp90ab1	HS90B_RAT	P34058	152 8 (4)	7 (4)
Heat shock cognate 71 kDa protein	Hspa8	HSP7C_RAT	P63018	343 14 (9)	13 (9)
Heat shock protein beta-1	Hspb1	HSPB1_RAT	P42930	127 7 (3)	7 (3)
Isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial	Idh3a	IDH3A_RAT	Q99NA5	33 3 (1)	3 (1)
Isocitrate dehydrogenase [NAD] subunit beta, mitochondrial	Idh3B	IDH3B_RAT	Q68FX0	353 11 (9)	5 (3)
Isocitrate dehydrogenase [NADP], mitochondrial	Idh2	IDHP_RAT	P56574	293 11 (6)	9 (6)
Eukaryotic translation initiation factor 5A-1	Eif5a	IF5A1_RAT	Q3T1J1	70 2 (1)	2 (1)
Ig gamma-2A chain C region	Igg-2a	IGG2A_RAT	P20760	49 3 (1)	3 (1)
MICOS complex subunit Mic60	Immt	IMMT_RAT	Q3KR86	41 2 (1)	2 (1)
Inter-alpha-trypsin inhibitor heavy chain H3	Itih3	ITIH3_RAT	Q63416	72 5 (2)	5 (2)
Isovaleryl-CoA dehydrogenase, mitochondrial	Ivd	IVD_RAT	P12007	59 3 (1)	3 (1)
Keratin, type I cytoskeletal 10	Krt10	K1C10_RAT	Q6IFW6	96 12 (6)	5 (2)
Keratin, type I cytoskeletal 14	Krt14	K1C14_RAT	Q6IFV1	75 6 (2)	5 (2)
Keratin, type I cytoskeletal 18	Krt18	K1C18_RAT	Q5BJY9	34 8 (1)	5 (1)

Keratin, type II cytoskeletal 1b	Krt77	K2C1B_RAT	Q6IG01	245 12 (9)	6 (3)
Keratin, type II cytoskeletal 5	Krt5	K2C5_RAT	Q6P6Q2	206 8 (7)	5 (4)
Keratin, type II cytoskeletal 6A	Krt6a	K2C6A_RAT	Q4FZU2	324 14 (10)	5 (3)
Keratin, type II cytoskeletal 7	Krt7	K2C7_RAT	Q6IG12	68 4 (3)	3 (2)
Keratin, type II cytoskeletal 8	Krt8	K2C8_RAT	Q10758	83 7 (3)	5 (2)
Adenylate kinase 2, mitochondrial	Ak2	KAD2_RAT	P29410	122 6 (3)	6 (3)
Kininogen-1	Kng1	KNG1_RAT	P08934	35 3 (1)	3 (1)
T-kininogen 1	Map1	KNT1_RAT	P01048	30 4 (1)	4 (1)
Ig lambda-2 chain C region	N/A	LAC2_RAT	P20767	48 1 (1)	1 (1)
L-lactate dehydrogenase A chain	Ldha	LDHA_RAT	P04642	93 6 (3)	6 (3)
Galectin-1	Lgals1	LEG1_RAT	P11762	44 1 (1)	1 (1)
Galectin-5	Lgals5	LEG5_RAT	P47967	54 5 (2)	4 (1)
Lumican	Lum	LUM_RAT	P51886	55 5 (5)	3 (3)
Myristoylated alanine-rich C-kinase substrate	Marcks	MARCS_RAT	P30009	76 2 (1)	2 (1)
Mitochondrial carnitine/acylcarnitine carrier protein	Slc25a20	MCAT_RAT	P97521	53 2 (1)	2 (1)
Mast cell protease 1	Mcpt1	MCPT1_RAT	P09650	47 2 (2)	1 (1)
Malate dehydrogenase, cytoplasmic	Mdh1	MDHC_RAT	O88989	111 6 (3)	6 (3)
Malate dehydrogenase, mitochondrial	Mdh2	MDHM_RAT	P04636	83 7 (5)	3 (3)
Monoglyceride lipase	Mgl1	MGLL_RAT	Q8R431	28 2 (1)	2 (1)
Methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial	Aldh6a1	MMSA_RAT	Q02253	163 6 (4)	6 (4)
Moesin	Msn	MOES_RAT	O35763	63 7 (2)	5 (2)
Phosphate carrier protein, mitochondrial	Slc25a3	MPCP_RAT	P16036	51 2 (1)	2 (1)
Myosin regulatory light chain RLC-A	Rlc-a	MRLCA_RAT	P13832	41 1 (1)	1 (1)
Murinoglobulin-1	Mug1	MUG1_RAT	Q03626	185 12 (5)	11 (5)
Myosin-9	Myh9	MYH9_RAT	Q62812	66 1 (1)	1 (1)
Myosin light polypeptide 6	Myi6	MYL6_RAT	Q64119	71 5 (2)	5 (2)
Myosin regulatory light polypeptide 9	Myl9	MYL9_RAT	Q64122	55 19 (1)	17 (1)
Myomegalin	Pde4dip	MYOME_RAT	Q9WUJ3	31 11 (1)	10 (1)
Nucleoside diphosphate kinase B	Nme2	NDKB_RAT	P19804	40 2 (2)	2 (2)
NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 9, mitochondrial	Ndufa9	NDUA9_RAT	Q5BK63	35 5 (2)	5 (2)
NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 10, mitochondrial	Ndufa10	NDUAA_RAT	Q561S0	64 7 (1)	5 (1)
NADH-ubiquinone oxidoreductase 75 kDa subunit, mitochondrial	Ndufs1	NDUS1_RAT	Q66HF1	190 4 (4)	4 (4)
NADH dehydrogenase [ubiquinone] flavoprotein 2, mitochondrial	Ndufv2	NDUV2_RAT	P19234	244 6 (5)	5 (4)
Omega-amidase NIT2	Nit2	NIT2_RAT	Q497B0	75 4 (1)	3 (1)
2-oxoglutarate dehydrogenase, mitochondrial	Ogdh	ODO1_RAT	Q5XI78	296 16 (10)	14 (9)
Dihydrolipoyllysine-residue succinyltransferase component of 2-oxoglutarate dehydrogenase complex, mitochondrial	Dlst	ODO2_RAT	Q01205	200 9 (4)	9 (4)
Dihydrolipoyllysine-residue acetyltransferase component of pyruvate dehydrogenase complex, mitochondrial	Dlat	ODP2_RAT	P08461	93 5 (3)	4 (2)
Pyruvate dehydrogenase E1 component subunit alpha, somatic form, mitochondrial	Pdha1	ODPA_RAT	P26284	79 9 (3)	7 (3)
Propionyl-CoA carboxylase beta chain, mitochondrial	Pccb	PCCB_RAT	P07633	55 7 (2)	2 (1)
Protein disulfide-isomerase A3	Pdia3	PDIA3_RAT	P11598	107 4 (3)	4 (3)
Protein disulfide-isomerase A6	Pdia6	PDIA6_RAT	Q63081	72 5 (2)	5 (2)
Phosphatidylethanolamine-binding protein 1	Pebp1	PEBP1_RAT	P31044	38 2 (1)	2 (1)
Phosphoglycerate kinase 1	Pgk1	PGK1_RAT	P16617	101 9 (3)	9 (3)
Prohibitin	Phb	PHB_RAT	P67779	44 3 (1)	3 (1)
Plectin	Plec	PLEC_RAT	P30427	27 11 (1)	11 (1)
Perilipin-1	Plin1	PLIN1_RAT	P43884	99 2 (1)	1 (1)
Plasminogen	Plg	PLMN_RAT	Q01177	35 3 (1)	3 (1)
Purine nucleoside phosphorylase (PNP)	Pnp	PNPH_RAT	P85973	49 2 (1)	2 (1)
Serum paraoxonase/arylesterase 1	Pon1	PON1_RAT	P55159	47 4 (2)	3 (1)
Low molecular weight phosphotyrosine protein phosphatase	Acp1	PPAC_RAT	P41498	60 1 (1)	1 (1)
Peptidyl-prolyl cis-trans isomerase A	Ppia	PPIA_RAT	P10111	69 15 (3)	10 (3)
Peptidyl-prolyl cis-trans isomerase B	Ppib	PPIB_RAT	P24368	20 4 (1)	4 (1)

Peptidyl-prolyl cis-trans isomerase F, mitochondrial	Ppif	PPIF_RAT	P29117	38 2 (1)	2 (1)
Peroxiredoxin-1	Prdx1	PRDX1_RAT	Q63716	80 7 (3)	7 (3)
Peroxiredoxin-2	Prdx2	PRDX2_RAT	P35704	360 9 (9)	6 (6)
Peroxiredoxin-5, mitochondrial	Prdx5	PRDX5_RAT	Q9R063	107 4 (2)	4 (2)
Prolargin	Prelp	PRELP_RAT	Q9EQP5	96 5 (3)	5 (3)
Profilin-1	Pfn1	PROF1_RAT	P62963	137 3 (3)	3 (3)
Polymerase I and transcript release factor	Ptrf	PTRF_RAT	P85125	42 5 (2)	4 (2)
Pyruvate carboxylase, mitochondrial	Pc	PYC_RAT	P52873	56 4 (2)	4 (2)
Cytochrome b-c1 complex subunit 1, mitochondrial	Uqcrc1	QCR1_RAT	Q68FY0	101 7 (2)	5 (2)
Cytochrome b-c1 complex subunit 2, mitochondrial	Uqcrc2	QCR2_RAT	P32551	324 9 (8)	6 (5)
Cytochrome b-c1 complex subunit 8	Uqcrcq	QCR8_RAT	Q7TQ16	49 2 (2)	1 (1)
Ras-related C3 botulinum toxin substrate 1	Rac1	RAC1_RAT	Q6RUV5	36 2 (2)	1 (1)
RNA-binding motif protein, X chromosome	Rbmx	RBMX_RAT	Q4V898	28 5 (1)	4 (1)
Receptor expression-enhancing protein 5	Reep5	REEP5_RAT	B2R237	61 3 (2)	3 (2)
60S acidic ribosomal protein P0	Rplp0	RLA0_RAT	P19945	33 2 (1)	2 (1)
60S acidic ribosomal protein P1	Rplp1	RLA1_RAT	P19944	47 2 (1)	1 (1)
Heterogeneous nuclear ribonucleoprotein A1	Hnrnpa1	ROA1_RAT	P04256	150 10 (7)	7 (4)
Heterogeneous nuclear ribonucleoproteins A2/B1	Hnrnpa2b1	ROA2_RAT	A7VIC2	108 7 (4)	7 (4)
Heterogeneous nuclear ribonucleoprotein A3	Hnrnpa3	ROA3_RAT	Q6URK4	218 13 (3)	7 (2)
Ubiquitin-40S ribosomal protein S27a	Rps27a	RS27A_RAT	P62982	100 9 (5)	5 (3)
40S ribosomal protein SA	Rpsa	RSSA_RAT	P38983	55 4 (3)	3 (2)
Ryanodine receptor 2	Ryr2	RYR2_RAT	B0LPN4	35 28 (10)	10 (1)
Protein S100-A10	S100a10	S10AA_RAT	P05943	95 3 (3)	2 (2)
Sodium-coupled neutral amino acid transporter 4	Slc38a4	S38A4_RAT	Q9EQ25	26 4 (1)	1 (1)
47 kDa heat shock protein	Serpinh1	SERPH_RAT	P29457	145 3 (2)	2 (1)
Superoxide dismutase [Cu-Zn]	Sod1	SODC_RAT	P07632	100 20 (3)	18 (3)
Serine protease inhibitor A3K	Serpina3k	SPA3K_RAT	P05545	126 7 (2)	7 (2)
Serine protease inhibitor A3N	Serpina3n	SPA3N_RAT	P09006	100 8 (2)	7 (2)
Spectrin alpha chain, non-erythrocytic 1	Sptan1	SPTN1_RAT	P16086	35 23 (1)	14 (1)
Stathmin	Stmn1	STMN1_RAT	P13668	47 1 (1)	1 (1)
Succinyl-CoA ligase [ADP/GDP-forming] subunit alpha, mitochondrial	Suclg1	SUCA_RAT	P13086	71 3 (2)	3 (2)
Small ubiquitin-related modifier 1	Sumo1	SUMO1_RAT	Q5I0H3	24 1 (1)	1 (1)
Small ubiquitin-related modifier 2	Sumo2	SUMO2_RAT	P61959	79 1 (1)	1 (1)
Transgelin	Tagln	TAGL_RAT	P31232	355 15 (10)	9 (5)
Tubulin alpha-1A chain	Tuba1a	TBA1A_RAT	P68370	61 2 (1)	2 (1)
Tubulin alpha-1B chain	Tuba1b	TBA1B_RAT	Q6P9V9	160 11 (4)	8 (4)
Tubulin beta-3 chain	Tubb3	TBB3_RAT	Q4QRB4	345 15 (9)	10 (6)
Tubulin beta-4B chain	Tubb4b	TBB4B_RAT	Q6P9T8	441 14 (11)	8 (6)
Tubulin beta-5 chain	Tubb5	TBB5_RAT	P69897	332 13 (10)	8 (6)
T-complex protein 1 subunit alpha	Tcp1	TCPA_RAT	P28480	37 8 (2)	6 (2)
Acetyl-CoA acetyltransferase, mitochondrial	Acat1	THIL_RAT	P17764	367 8 (6)	5 (4)
3-ketoacyl-CoA thiolase, mitochondrial	Acaa2	THIM_RAT	P13437	51 4 (2)	4 (2)
Thy-1 membrane glycoprotein	Thy1	THY1_RAT	P01830	86 4 (2)	3 (1)
Transcription intermediary factor 1-beta	Trim28	TIF1B_RAT	O08629	17 6 (1)	4 (1)
Transketolase	Tkt	TKT_RAT	P50137	201 9 (6)	9 (6)
Triosephosphate isomerase	Tpi1	TPI5_RAT	P48500	106 7 (4)	6 (4)
Tropomyosin beta chain	Tpm2	TPM2_RAT	P58775	88 7 (4)	4 (3)
Tropomyosin alpha-3 chain	Tpm3	TPM3_RAT	Q63610	137 11 (5)	9 (5)
Serotransferrin	Tf	TRFE_RAT	P12346	517 19 (15)	17 (13)
Transthyretin	Ttr	TTHY_RAT	P02767	495 11 (9)	7 (6)
Ubiquitin-like modifier-activating enzyme 1	Uba1	UBA1_RAT	Q5U300	61 4 (1)	4 (1)
Mitochondrial brown fat uncoupling protein 1	Ucp1	UCP1_RAT	P04633	830 28 (24)	9 (7)

Cytochrome b-c1 complex subunit Rieske, mitochondrial
Vimentin
Vitamin D-binding protein

Uqcrcs1	UCRI_RAT	P20788	104 4 (4)	4 (4)
Vim	VIME_RAT	P31000	500 20 (15)	16 (14)
Gc	VTDB_RAT	P04276	37 2 (1)	2 (1)

Supplemental Table 2 - Protein of cardiac visceral adipose tissue identified in obese and lean ZSF1 and common proteins between obese and lean ZSF1 rats.

Elements only in Obese				Elements only in Lean				Common elements in Lean and Obese							
Entry	Entry name	Protein name	Gene	MW	Entry	Entry name	Protein name	Gene	MW	Entry	Entry Name	Protein name	Gene name	cmp/PAI ratio	MW (kDa)
P06159	SCML2_RAT	Small ubiquitin-related modifier 2	Smu2	10664	P11951	CMC2_RAT	Cytoschrome c oxidase subunit 6C-2	Cox6c2	1446	P14449	FIBP_RAT	Fibronogen beta chain	Fibp	4.58	54201
P06159	APNC3_RAT	Apolipoprotein C-III	Apoc3	11110	P11171	CTAL2_RAT	Cytoschrome c oxidase subunit 7A2, mitochondrial	Cox7a2	9347	P14702	ROA2_RAT	Heterogeneous nuclear ribonucleoproteins A2/B1	Hnnp2b1	3.26	37455
P20767	LAC2_RAT	Ig lambda-2 chain C region	Ap3h3	11311	Q17034	OC9B_RAT	Cytoschrome b-c1 complex subunit 8	Oxq9b	9845	Q03041	AIM3_RAT	Alpha-1-macroglobulin	Alm	2.32	167019
P02864	HA_RAT	Hyaluronic acid	Hyal3	11361	P06254	DOPO1_RAT	Dihydropyridine dehydrogenase	Ddp1	11325	P12155	A1AT_RAT	Alpha-1-antitrypsin	Sempha1	2.24	46105
P19444	RLAI_RAT	60S acidic ribosomal protein P1	Rplp1	11491	P47967	LEGS_RAT	Galactose 5-epimerase	Lgalp5	18186	P20059	HEMO_RAT	Hemopoietin	Hps	2.20	53134
Q13083	SUMO1_RAT	Small ubiquitin-related modifier 1	Sumo1	11550	P19888	COX4L_RAT	Cytoschrome c oxidase subunit 4 isoform 1, mitochondrial	Cox4l1	19192	P02770	ALBU_RAT	Albumin	Alb	2.12	68866
P01511	SDMB1_RAT	Beta-2-microglobulin	B2m	12711	Q02217	REPS1_RAT	Resorpin cytoskeleton-anchoring protein 7	Reps1	21417	P06439	ANAL_RAT	Apolipoprotein A-I	Apoa1	2.09	30683
Q00715	H2B1_RAT	Histone H2B type 1	H2b1	13062	P15704	PRDX2_RAT	Peroxiredoxin-2	Pdx2	21770	P13346	TRFE_RAT	Transthyretin	Tf	2.08	76344
P35797	APOC4_RAT	Apolipoprotein C-IV	Apoc4	14522	P20117	PPF_RAT	Popdipyl-prolyl cis-trans isomerase F, mitochondrial	Ppf	21796	F48017	ANXA4_RAT	Annx4	1.89	37506	
P02863	PRPF1_RAT	Preinitiation factor 1	Prpf1	14668	P12322	TAGE_RAT	Transglutinin	Tage	22588	P02703	FRS1_RAT	Furin-like domain 1	Frl1	1.78	20736
P42435	H3T_RAT	Histone H3.3	H3t	15139	P20410	KADD_RAT	Adenylyl kinase 2, mitochondrial	Kadd	26363	P05545	SPAK3_RAT	Serine protease inhibitor A3K	Septpa3k	1.75	46532
Q08718	OMG1_RAT	Ola1 mutation factor gamma	Omfg1	16769	P19234	NDEU2_RAT	NADH dehydrogenase [ubiquinone] dehydrogenase 2, mitochondrial	Ndu2	27361	P11938	PKM3_RAT	Protein kinase M3 isoform A3	Pkm3	1.66	56588
Q17127	IFAF1_RAT	Eukaryotic translation initiation factor 5A-1	Ifaf1	16821	P06059	MPTP1_RAT	Mitochondrial cytochrome c heme b3/4 complex subunit 1	Mptp1	28599	P0C109	HEAC_RAT	Histone H2A type 1-C	H2afy1	1.63	14097
P13668	STN1L1_RAT	Stn1-like 1	Stn1l1	17278	Q03780	UCR2_RAT	Cytoschrome b-c1 complex subunit Ricker, mitochondrial	Ucr2	29427	P14141	CAH1_RAT	Carbonyl sphylinase 1	Ca3	1.22	29413
P14148	PPAC_RAT	Leu molecular weight phosphotyrosine protein phosphatase	Shp1	18140	Q04780	NIT2_RAT	Oxygens-mitochondrial NIT2	Nit2	30682	P15846	LUM1_RAT	Lumican	Lum	1.19	32525
P01430	THY1_RAT	Thy1-membrane glycoprotein	Thy1	18161	P21065	EC1L_RAT	Empl-C1-like domain 1, mitochondrial	Ecl1	32224	P04762	CA7A_RAT	Calnexin	Can	1.14	39719
P45502	COX1_RAT	Cytochrome c oxidase subunit 1	Cox1	18521	Q09073	AOTF_RAT	ADP-ATP translocase 2	Slc25a20	32886	P08711	ACTB_RAT	Actin, cytoplasmic II	Actb	1.14	41710
P14148	PPAC_RAT	Leu molecular weight phosphotyrosine protein phosphatase	Shp1	18522	P07521	MCAT_RAT	Mitochondrial carnitine acyltransferase carrier protein	Slc25a20	33132	Q08431	MGLL1_RAT	Megalin	Mgl1	1.04	33478
P13104	PEP1_RAT	Phosphatidylethanolamine-binding protein 1	Pebp1	20788	P13086	SLCA_RAT	Succinyl-CoA ligase [ADP-GDP-forming] subunit alpha, mitochondrial	Slga1	36125	P02262	RS2TA_RAT	Ubiquitin-48 ribosomal protein S27a	Rps27a	0.93	17939
P19132	FRS1_RAT	Furin-like domain 1	Frl1	21113	Q02551	ETFB_RAT	Dihydro-1,5-dihydro-2-thiazolo[4,5-b]pyridin-4(1H)-one, mitochondrial	Etfb	38148	P09778	TBB4B_RAT	Tubulin beta-4b chain	Tubb4b	0.89	49760
Q18792	CDK2_RAT	Cdk2 division control protein 2 homolog	Cdk2	21245	Q04642	LDBA_RAT	L-lactate dehydrogenase A chain	Ldha	36427	P02414	COI1A_RAT	Collagen alpha-1(I) chain	Col1a1	0.81	137809
Q08179	RAC1_RAT	Ras-related C1 borulin domain protein 1	Rac1	21496	Q09099	MDHC_RAT	Mitochondrial dehydrogenase, cytoplasmic	Mdh1	36446	P02050	APPE_RAT	Apolipoprotein E	ApoE	0.69	33731
P14639	APOM1_RAT	Apolipoprotein M	Apom1	21499	Q04049	ABHD10_RAT	1-acylglycerol-3-phosphate O-acyltransferase ABHD10	Abhd10	39079	P12164	GPS1_RAT	Glyceraldehyde-3-phosphate dehydrogenase-3	G3p1	0.67	23490
Q03716	PRDX1_RAT	Peroxiredoxin-1	Pdx1	22095	Q10247	CLTB1_RAT	Cytosolic leukotriene receptor 1	Cytlr1	39117	Q04364	ROA3_RAT	Heterogeneous nuclear ribonucleoprotein A3	Hnnpa3	0.66	39624
Q15713	GDBP1_RAT	Rho GTP-dissociation inhibitor 1	Gdbp1	23303	Q16150	NDEUA_RAT	NADH dehydrogenase [ubiquinone] alpha subcomplex subunit 10, mitochondrial	Ndu10	40468	P29447	SEPH1_RAT	47 kDa heat shock protein	Sehpa1	0.63	46488
P24368	PP2B_RAT	Popdipyl-prolyl cis-trans isomerase B	Ppb	23788	P02738	ACTA_RAT	Actin, cardiac smooth muscle	Anca2	41292	Q07936	ANXA2_RAT	Annx2	0.50	38654	
P25225	HMGCR_RAT	High-molecular weight protein B2	Hmgcr	24164	Q06066	CDNA_RAT	Glutamate synthetase	Glat	42248	P04618	HSPC1_RAT	Heat shock cognate 71 kDa protein	Hsc70	0.48	76827
P05052	GSTA1_RAT	Glutathione S-transferase alpha-1	Gsta1	25591	Q04920	IDH3B_RAT	Isocitrate dehydrogenase [NAD+] subunit beta, mitochondrial	Ihd3b	42327	P42010	HSPB1_RAT	Heat shock protein beta-1	Hspb1	0.47	22979
P45800	TPS1_RAT	Transphosphatase isomerase	Tps1	26832	Q15863	NXAI_RAT	Nucleoside diphosphate [ubiquinone] alpha subcomplex subunit 9, mitochondrial	Ndu9	42352	P10719	ATPB_RAT	ATP synthase subunit beta, mitochondrial	Atp6b	0.45	56318
Q04610	CLC1_RAT	Chloride intracellular channel protein 1	Ccl1	26944	Q09095	PRELP_RAT	Proteoglycan	Prlp	43152	P09006	SPAIN1_RAT	Serine protease inhibitor A1N	Septpa1n	0.44	46622
P13102	143Z_RAT	14-3-3 protein zeta/delta	Ywhz	27784	P26284	ODPA_RAT	Pyruvate dehydrogenase E3 component subunit alpha, somatic form, mitochondrial	Pdh1	43199	P14668	ANXA5_RAT	Annx5	0.43	37322	
P02255	143T_RAT	14-3-3 protein theta	Ywhp	27781	P15651	ACAD9_RAT	Short-chain specific acyl-CoA dehydrogenase, mitochondrial	Acad9	44737	P13418	CALB_RAT	Calbindin	Calb	0.42	47960
P15213	143B_RAT	14-3-3 protein beta	Ywhb	28017	P12067	PDZ_RAT	Low-molecular weight protein 1, mitochondrial	Pdz1	44846	P04615	CEU1_RAT	Cytochrome c oxidase subunit 1B, mitochondrial	Cox1b	0.42	47960
P02255	ERP29_RAT	Endoplasmic reticulum resident protein 29	Yerp29	28537	Q04503	ACADM_RAT	Medium-chain specific acyl-CoA dehydrogenase, mitochondrial	Acadm	46526	P05125	PIRF_RAT	Polymerase II transcription release factor	Pif	0.43	43882
P03400	TPAO1_RAT	Transposon alpha-3 chain	Tpaol1	28989	Q01205	ODO2_RAT	Dihydrodipyrone-oxidase succinyltransferase component of 2-oxoglutarate dehydrogenase complex, mitochondrial	Odo2	48894	P16617	PKGI_RAT	Phosphoglycerate kinase 1	Pgk1	0.31	44510
P06039	MARCS3_RAT	Mitochondrial alanine-rich C-tissue substrate	Marcs3	29777	P04670	TBA1A_RAT	Tubulin alpha-1A chain	Tuba1a	50104	P04744	EMIA1_RAT	Alpha-enolase	Enol1	0.27	47098
P06779	PHF_RAT	Profilin	Pph	29802	P04674	HEP1_RAT	Isocitrate dehydrogenase [NADP], mitochondrial	Hid1b	50935	P06102	SOX5_RAT	Superoxide dismutase [Cu-Zn]	Sod1	0.13	15962
P05973	PNP1_RAT	Paracetamol-nucleoside phosphorylase (PNP)	Pnp	32291	Q06087	EC1B_RAT	Tyrosinase enzyme subunit beta, mitochondrial	Hid1b	51362	Q10377	GPDA_RAT	Glyceraldehyde-3-phosphate dehydrogenase [NAD+] (1), cytoplasmic	Gpd1	0.13	37423
P09881	RISA_RAT	49S ribosomal protein SA	Rpsa	32861	Q06076	OC9B_RAT	Cytoschrome b-c1 complex subunit 1, mitochondrial	Oxq9b	52812	P08778	TPS1_RAT	Transphosphatase	Tps1	0.08	32817
P26444	APM1_RAT	Beta-5-glycoprotein 1	Apb1	33375	Q04920	DLE1E_RAT	Dihydrodipyrone dehydrogenase, mitochondrial	Ddl1	54004	P12075	COX5B_RAT	Cytoschrome c oxidase subunit 5B, mitochondrial	Cox5b	0.00	13966
P02256	BOA1_RAT	Heterogeneous nuclear ribonucleoprotein A1	Hnpa1	34191	Q14384	PLIN1_RAT	Perilipin-1	Pfn1	53759	P10623	FABP4_RAT	Fatty acid-binding protein, adipocyte	Fabp4	0.00	14099
P19845	RLA1_RAT	60S acidic ribosomal protein P0	Rplp0	34194	P11884	ALDH2_RAT	Aldehyde dehydrogenase, mitochondrial	Alhd2	54821	P11262	LEI1_RAT	Galactose 1-epimerase 1	Lgalp1	0.00	14821
P07943	ALDR_RAT	Alcohol dehydrogenase	Ala1	35774	Q04780	KC1C0_RAT	Keratin, type I cytoskeletal 10	Kc10	56470	P02141	CALM1_RAT	Calmodulin	Calm1	0.00	16827
P35280	ANXA4_RAT	Annx4	Anxa4	35826	Q02253	MMSA_RAT	Methylmalonyl-coenzyme A mutase [acylating], mitochondrial	Mmsa1	57771	Q04119	MYL1_RAT	Myosin light polypeptide-6	My16	0.00	16964
P15119	POXI_RAT	Scram phospholipase 1	Ppx1	39313	P09213	PCOL1_RAT	Procollagen-1 alpha 1 chain	Pcol1	55688	P10818	NDEB_RAT	Nucleoside diphosphate kinase B	Nudc2	0.00	17272
P06087	GNAT1_RAT	Guanine nucleotide-binding protein (G _i) subunit alpha-2	Gnat1	40473	Q14921	KC1C2_RAT	Keratin, type I cytoskeletal 6A	Kc6a	55911	Q04122	MYL9_RAT	Myosin regulatory light polypeptide-9	My19	0.00	19708
Q09379	FET1B_RAT	Fem1-B	Fem1b	41586	Q04780	HEHD_RAT	EH domain-containing protein 2	Hehd2	61199	P13102	MR1CA_RAT	Myosin regulatory light chain RL-C1A	Rlc1a	0.00	19883
P10423	ANAK1_RAT	Alpha-actinin-1	Ana1	41867	P10809	DHEX1_RAT	Glutamate dehydrogenase 1, mitochondrial	Gdh1	61377	P05101	GSTP1_RAT	Glutathione S-transferase P1	Gstp1	0.00	21424
P08035	ACTG1_RAT	Actin, alpha non-muscle 1	Anca1	41992	Q16041	ODP1_RAT	Dihydrodipyrone-oxidase acetyltransferase component of pyruvate dehydrogenase complex, mitochondrial	Odo1	67123	P10183	143D_RAT	14-3-3 protein gamma	Ywhg3	0.00	25263
P41998	BRAC1_RAT	RNA-binding motif protein, X chromosome	Brac1	42352	P10117	TKT_RAT	Transketolase	Tkt	67561	P03760	IGFBP1_RAT	Ig gamma-2 chain C region	Igf2r	0.00	35163
P10251	AP0A1_RAT	Apolipoprotein A-IV	Apoa4	44429	Q102L2	DISA_RAT	Succinate dehydrogenase [ubiquinone] dehydrogenase subunit, mitochondrial	Sdhb	71570	Q44501	DECR1_RAT	2,4-dienoyl-CoA reductase, mitochondrial	Decr1	0.00	36110
P13611	CBQ1_RAT	Cardiac-intestinal binding fibronin	Serpmp2	44642	P18886	CFP1_RAT	Carnitine O-palmitoyltransferase 2, mitochondrial	Cfp1	74061	P07150	ANXA1_RAT	Annx1	0.00	38865	
P07844	HSDP1_RAT	Heterogeneous nuclear ribonucleoprotein F	Hnfp1	45791	P11643	ACSL1_RAT	Long-chain fatty-acyl-CoA ligase 1	Acsl1	78128	P13100	YME1_RAT	Yeast meiosis 1	Yme1	0.00	37500
P41767	ADP1_RAT	Actin-related protein 3	Actr3	47327	Q04081	NCS1_RAT	NADH ubiquinone reductase-75 kDa subunit, mitochondrial	Ndu1	79362	P10999	ATP1A1_RAT	ATP synthase subunit alpha, mitochondrial	Atp1a1	0.00	59717
Q15254	GOSE1_RAT	Gdyf1 ras-geff-1	Gosep1	47643	P11571	GFDM1_RAT	Very long-chain specific acyl-CoA dehydrogenase, mitochondrial	Gfcm1	80921	Q08571	GELS_RAT	Galactose 1-epimerase 2	Lgalp2	0.00	66014
Q18792	K1C11_RAT	Keratin, type I cytoskeletal 11	Kc11	47732	Q02446	CO1A2_RAT	Collagen alpha-2(I) chain	Col1a2	129486	P08649	COX1_RAT	Cytochrome c oxidase subunit I	Cox1	0.00	192462
P01648	KNT1_RAT	Tubulin gamma 1	Knt1	47746	P12373	PFC1_RAT	Pyruvate carboxylase, mitochondrial	Pfc1	129695	P10686	SPOV1_RAT	Spectrin alpha chain, non-erythrocytic 1	Spm1	0.00	192462
Q03081	PDMA4_RAT	Protein disulfide-isomerase A6	Pdia6	48143	Q09113	MYOM1_RAT	Myomesin	Pdme1	204881	Q08573	ETFB_RAT	Electron transfer flavoprotein subunit beta	Etfb	-0.11	26730
P09997	TBA1B_RAT	Tubulin beta-1 chain	Tuba1b	49639	Q04780	RYR2_RAT	Ryanodine receptor 2	Ryr2	562394	P09065	ALDOA_RAT	Fructose-bisphosphate aldolase A	Aldoa	-0.17	39327
P02630	EF1A1_RAT	Elongation factor 1 alpha 1	Ef1a1	50982	P02772	CH10_RAT	10 kDa heat shock protein, mitochondrial	Hsp10	13095	P01946	IBA1_RAT	Human beta-actin alpha-1/2	Iba1	-0.50	15139
Q09199	TBA1B_RAT	Tubulin beta-1 chain	Tuba1b	50128	Q15863	ADCK1_RAT	Chaperone activity of beta-1 complex-like, mitochondrial	Adck1	72180	Q05900	AOC1_RAT	Mitochondrial primary amine oxidase	Aoc1	-0.55	28277
Q04084	TBA1B_RAT	Tubulin beta-1 chain	Tuba1b	50336	P10818	CXMA1_RAT	Cytoschrome c oxidase subunit 6A1, mitochondrial	Cox6a1	12293	P24900	FET1A_RAT	Alpha-2-HS-glycoprotein	Hsp27	-0.62	37951
P10399	GDBP1_RAT	Rho GTP-dissociation inhibitor beta	Gdbp1	50565	P04334	EF1D_RAT	Elongation factor 1 delta, mitochondrial	Ef1d	44911	Q15571	ACT1F_RAT	Actin, cytoplasmic 1	Acta1	-0.68	46670
P02400	FIB1_RAT	Fibronectin gamma chain	Fib1	50648	Q14921	ETFD_RAT	Electron transfer flavoprotein-ubiquinone oxidoreductase, mitochondrial	Etf1b	51615	P10111	PP1A_RAT	Popdipyl-prolyl cis-trans isomerase A	Ppp1a	-0.72	17863
Q08102	K2N7_RAT	Keratin, type II cytoskeletal 7													

Supplemental Table 3 - Classically and non-classically secreted proteins in cardiac visceral adipose tissue of lean and obese rats

Secretome P - Non-classically secreted proteins

Unique Obese				
Name	NN-score	Odds	Weighted by prior	
P61959	Small ubiquitin-related modifier 2	0.883	5.15	0.01
P20767	Ig lambdaB2 chain C region	0.833	4.281	0.009
Q510H3	Small ubiquitin-related modifier 1	0.773	3.082	0.006
P84245	Histone H3.3	0.7	2.407	0.005
Q80T18	Glia maturation factor gamma	0.766	2.814	0.006
P13668	Stathmin	0.719	2.281	0.005
P41488	Low molecular weight phosphotyrosine protein phosphatase 2	0.684	4.854	0.01
P45592	Cofilin-1	0.628	1.757	0.004
Q7MDE3	Dextrin	0.601	1.592	0.003
P19132	Ferritin heavy chain	0.623	1.61	0.003
Q8CFN2	Cell division control protein 42 homolog	0.747	2.869	0.006
P38983	40S ribosomal protein SA	0.6	1.373	0.003
P04897	Guanine nucleotide-binding protein G(i) subunit alpha-2	0.629	1.587	0.003
Q35254	Golgi reassembly-stacking protein 1	0.716	2.21	0.004
Q61612	Keratin, type II cytoskeletal 7	0.626	1.692	0.003
Q912N1	Coronin-1A	0.781	3.432	0.007
Q3KR86	MICOS complex subunit Mic60	0.661	1.79	0.004
P06759	Apolipoprotein C-III	0.962	7.218	0.014
P55797	Apolipoprotein C-IV	0.802	3.462	0.007
P14630	Apolipoprotein M	0.689	1.967	0.004
P24368	Peptidyl-prolyl cis-trans isomerase B	0.859	4.554	0.009
P52555	Endoplasmic reticulum resident protein 29	0.951	7.105	0.014
P26644	Beta-2-glycoprotein 1	0.454	0.865	0.002
P55159	Serum paraoxonase/arylesterase 1	0.794	3.23	0.006
Q9QX79	Fetuin-B	0.748	2.799	0.006
P31211	Corticosteroid-binding globulin	0.863	4.636	0.009
P01048	T-kininogen 1	0.643	1.681	0.003
Q63081	Protein disulfide-isomerase A6	0.682	1.862	0.004
P02680	Fibrinogen gamma chain	0.682	1.853	0.004
P06689	Pancreatic alpha-amylase	0.802	3.27	0.007
P06761	78 kDa glucose-regulated protein	0.752	2.67	0.005

Signal P - classically secreted proteins

Unique Obese				
Name	NN-score	Odds	Weighted by prior	
P06759	Apolipoprotein C-III	0.962	7.218	0.014
P07151	Beta-2-microglobulin	0.441	0.957	0.002
P55797	Apolipoprotein C-IV	0.802	3.462	0.007
P01830	Thy-1 membrane glycoprotein	0.389	0.751	0.002
P14630	Apolipoprotein M	0.689	1.967	0.004
P24368	Peptidyl-prolyl cis-trans isomerase B	0.859	4.554	0.009
P52555	Endoplasmic reticulum resident protein 29	0.951	7.105	0.014
P67779	Prohibitin	0.454	0.865	0.002
P26644	Beta-2-glycoprotein 1	0.454	0.865	0.002
P55159	Serum paraoxonase/arylesterase 1	0.794	3.23	0.006
Q9QX79	Fetuin-B	0.748	2.799	0.006
P02651	Apolipoprotein A-IV	0.484	0.953	0.002
P31211	Corticosteroid-binding globulin	0.863	4.636	0.009
P01048	T-kininogen 1	0.643	1.681	0.003
Q63081	Protein disulfide-isomerase A6	0.682	1.862	0.004
P02680	Fibrinogen gamma chain	0.682	1.853	0.004
P06689	Pancreatic alpha-amylase	0.802	3.27	0.007
P35565	Calnexin	0.136	0.281	0.001
P08934	Kininogen-1	0.558	1.23	0.002
P06761	78 kDa glucose-regulated protein	0.752	2.67	0.005
P06399	Fibrinogen alpha chain	0.461	0.957	0.002
Q01177	Plasminogen	0.343	0.632	0.001
Q66H00	Endoplasmic reticulum chaperone protein BiP	0.525	1.075	0.002
Q63416	Inter-alpha-trypsin inhibitor heavy chain H3	0.581	1.349	0.003
P14046	Alpha-1-inhibitor 3	0.489	0.997	0.002
Q03626	Murineoglobulin-1	0.57	1.28	0.003
P01026	Complement C3	0.569	1.277	0.003
P04937	Fibronectin	0.353	0.655	0.001
P58365	Cadherin-23	0.535	1.159	0.002

Unique Lean				
Name	NN-score	Odds	Weighted by prior	
Q7T016	Cytochrome b-c1 complex subunit 8	0.776	3.628	0.007
P47967	Galectin-5	0.76	3.192	0.006
P31232	Transgelin	0.628	1.71	0.003
P19234	NADH dehydrogenase [ubiquinone] flavoprotein 2, mitochondrial	0.707	2.304	0.005
P20788	Cytochrome b-c1 complex subunit Rieske, mitochondrial	0.833	3.922	0.008
P23965	Enoyl-CoA delta isomerase 1, mitochondrial	0.806	3.524	0.007
P97521	Mitochondrial carnitine/acylcarnitine carrier protein	0.687	2.148	0.004
Q62651	Delta(3,5)-delta(2,4)-dienoyl-CoA isomerase, mitochondrial	0.663	1.708	0.003
Q58K63	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 9, mitochondrial	0.639	1.715	0.003
P12007	Isovaleryl-CoA dehydrogenase, mitochondrial	0.634	1.718	0.003
P08503	Medium-chain specific acyl-CoA dehydrogenase, mitochondrial	0.628	1.7	0.003
Q68FY0	Cytochrome b-c1 complex subunit 1, mitochondrial	0.672	1.902	0.004
P11884	Aldehyde dehydrogenase, mitochondrial	0.627	1.595	0.003
Q02253	Methylmalonate-semialdehyde dehydrogenase [acylating], mitochondrial	0.853	4.483	0.009
P10818	Cytochrome c oxidase subunit 6A1, mitochondrial	0.723	2.616	0.005
P95834	Elongation factor Tu, mitochondrial	0.687	2.028	0.004
Q6UP61	Electron transfer flavoprotein-ubiquinone oxidoreductase, mitochondrial	0.656	1.788	0.004
P21913	Succinate dehydrogenase [ubiquinone] iron-sulfur subunit, mitochondrial	0.697	2.311	0.005
P11240	Cytochrome c oxidase subunit 5A, mitochondrial	0.921	6.069	0.012
P09650	Mast cell protease 1	0.955	7.248	0.014
Q56150	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 10, mitochondrial	0.698	2.168	0.004
Q9E0P5	Prolargin	0.69	2.229	0.004
P15650	Long-chain specific acyl-CoA dehydrogenase, mitochondrial	0.694	2.186	0.004

Unique Lean				
Name	NN-score	Odds	Weighted by prior	
P11951	Cytochrome c oxidase subunit 6C-2	0.461	0.967	0.002
P29117	Peptidyl-prolyl cis-trans isomerase F, mitochondrial	0.389	0.864	0.002
P09650	Mast cell protease 1	0.955	7.248	0.014
P13086	Succinyl-CoA ligase [ADP/GDP-forming] subunit alpha, mitochondrial	0.251	0.479	0.001
Q56150	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 10, mitochondrial	0.698	2.168	0.004
Q68FX0	Isoctrate dehydrogenase [NAD] subunit beta, mitochondrial	0.533	1.124	0.002
Q9E0P5	Prolargin	0.69	2.229	0.004
P07633	Propionyl-CoA carboxylase beta chain, mitochondrial	0.578	1.374	0.003
R08461	Dihydrodipicolylsine-residue acetyltransferase component of pyruvate dehydrogenase complex	0.407	0.769	0.002
P18886	Carnitine O-palmitoyltransferase 2, mitochondrial	0.598	1.414	0.003
P35571	Glycerol-3-phosphate dehydrogenase, mitochondrial	0.513	1.059	0.002
P02466	Collagen alpha-2(I) chain	0.266	0.503	0.001
P15650	Long-chain specific acyl-CoA dehydrogenase, mitochondrial	0.694	2.186	0.004

Common Proteins				
Name	NN-score	Odds	Weighted by prior	
Q8R431	Monoglyceride lipase	0.628	1.567	0.003
P62982	Ubiquitin-40S ribosomal protein S27a	0.88	4.948	0.01
Q07936	Annexin A2	0.763	2.878	0.006
P42930	Heat shock protein beta-1	0.627	1.69	0.003
P10719	ATP synthase subunit beta, mitochondrial	0.617	1.591	0.003
P85125	Polymerase I and transcript release factor	0.722	2.629	0.005
P07632	Superoxide dismutase [Cu-Zn]	0.728	2.524	0.005
P12075	Cytochrome c oxidase subunit 5B, mitochondrial	0.6	5.866	0.012
P70623	Fatty acid-binding protein, adipocyte	0.797	3.256	0.007
P62161	Calmodulin	0.676	2.172	0.004
P20760	Ig gamma-2A chain C region	0.666	1.802	0.004
P31000	Vimentin	0.601	1.45	0.003
P01946	Hemoglobin subunit alpha-1/2	0.612	1.444	0.003
Q61601	Keratin, type II cytoskeletal 1b	0.681	1.965	0.004
P14604	Enoyl-CoA hydratase, mitochondrial	0.888	5.448	0.011
R08NN3	Carbonic anhydrase 1	0.636	1.534	0.003
P00173	Cytochrome b5	0.773	3.361	0.007
Q63041	Alpha-1-macroglobulin	0.601	1.442	0.003
P17475	Alpha-1-antitrypsinase	0.693	1.927	0.004
P20059	Hemopexin	0.734	2.306	0.005
P04639	Apolipoprotein A-I	0.923	4.54	0.013
P12346	Serotransferrin	0.617	1.557	0.003
P05545	Serine protease inhibitor A3K	0.782	2.921	0.006
P02650	Apolipoprotein E	0.936	6.859	0.014
P23764	Glutathione peroxidase 3	0.912	6.029	0.012
P29457	47 kDa heat shock protein	0.793	3.564	0.007
P09006	Serine protease inhibitor A3N	0.806	3.295	0.007
P13635	Ceruloplasmin	0.659	1.755	0.004
Q08590	Membrane primary amine oxidase	0.779	2.927	0.006
Q68F11	Ubiquinone biosynthesis protein COQ9, mitochondrial	0.808	3.512	0.007
P02767	Transferrin	0.855	4.608	0.009
P13803	Electron transfer flavoprotein subunit alpha, mitochondrial	0.638	1.548	0.003

Common Proteins				
Name	NN-score	Odds	Weighted by prior	
sp_P14480_F	Fibrinogen beta chain	0.598	1.577	0.003
sp_Q63041_A	Alpha-1-macroglobulin	0.601	1.442	0.003
sp_P17475_A	Alpha-1-antitrypsinase	0.693	1.927	0.004
sp_P20059_H	Hemopexin	0.734	2.306	0.005
sp_P02770_A	Serum albumin	0.506	1.032	0.002
sp_P04639_A	Apolipoprotein A-I	0.923	4.54	0.013
sp_P12346_T	Serotransferrin	0.617	1.557	0.003
sp_P05545_S	Serine protease inhibitor A3K	0.782	2.921	0.006
sp_P11598_P	Protein disulfide-isomerase A3	0.497	0.996	0.002
sp_P51886_L	Lumican	0.55	1.171	0.002
sp_P02454_C	Collagen alpha-1(I) chain	0.155	0.315	0.001
sp_P02650_A	Apolipoprotein E	0.936	6.859	0.014
sp_P23764_G	Glutathione peroxidase 3	0.912	6.029	0.012
sp_P29457_S	47 kDa heat shock protein	0.793	3.564	0.007
sp_P09006_S	Serine protease inhibitor A3N	0.806	3.295	0.007
sp_P18418_C	Calreticulin	0.295	0.557	0.001
sp_P13635_C	Ceruloplasmin	0.659	1.755	0.004
sp_Q68F11_G	Gelsolin	0.51	1.053	0.002
sp_P08649_C	Complement C4	0.505	1.026	0.002
sp_Q08590_A	Membrane primary amine oxidase	0.779	2.927	0.006
sp_P24090_F	Alpha-2-HS-glycoprotein	0.584	1.298	0.003
sp_Q04276_V	Vitamin D-binding protein	0.545	1.159	0.002
sp_Q68F11_C	Ubiquinone biosynthesis protein COQ9, mitochondrial	0.808	3.512	0.007
sp_Q9P063_P	Peroxisomal oxidase 5, mitochondrial	0.557	1.203	0.002
sp_P02767_T	Transferrin	0.855	4.608	0.009
sp_P13803_E	Electron transfer flavoprotein subunit alpha, mitochondrial	0.638	1.548	0.003