

Table 1. In Vivo Mass spectrometry proteins (Sirt2^{+/+} vs. Sirt2^{-/-})

	Identified Proteins	Accession Number	Gene Name	Mito- or not	M.W.	Counts		
						+/+	-/-	ratio
1	ATP synthase subunit beta, mitochondrial	P56480	ATPB	Yes	56 kDa	6	1	0.2
2	Malate dehydrogenase, mitochondrial	P08249	MDHM	Yes	36 kDa	175	53	0.3
3	Ubiquitin carboxyl-terminal hydrolase isozyme L1	Q9R0P9	UCHL1	No	25 kDa	3	1	0.3
4	Hydroxyacyl-coenzyme A dehydrogenase, mitochondrial	Q61425	HCDH	Yes	34 kDa	8	3	0.4
5	ATP synthase subunit b, mitochondrial	Q9CQ07	AT5F1	Yes	29 kDa	10	4	0.4
6	Histone acetyltransferase p300	B2RWS6	EP300	No	264 kDa	10	4	0.4
7	Isocitrate dehydrogenase [NADP], mitochondrial	P54071	IDHP	Yes	51 kDa	18	8	0.4
8	Transaldolase	Q93092	TALDO	No	37 kDa	18	8	0.4
9	Dihydropyrimidinase-related protein 2	O08553	DPYL2	No	62 kDa	2	1	0.5
10	Elongation factor 1-alpha 1	P10126	EF1A1	No	50 kDa	4	2	0.5
11	Fumarate hydratase, mitochondrial	P97807	FUMH	Yes	54 kDa	24	12	0.5
12	Presequence protease, mitochondrial	Q8K411	PREP	Yes	117 kDa	4	2	0.5
13	ATP synthase subunit alpha, mitochondrial	Q03265	ATPA	Yes	60 kDa	17	10	0.6
14	Methylglutaconyl-CoA hydratase, mitochondrial	Q9JLZ3	AUHM	Yes	33 kDa	15	9	0.6
15	Myelin basic protein	P04370	MBP	No	27 kDa	23	15	0.7
16	Aconitate hydratase, mitochondrial	Q99KI0	ACON	Yes	85 kDa	72	48	0.7
17	Creatine kinase B-type	Q04447	KCRB	No	43 kDa	9	6	0.7
18	CREB-binding protein	P45481	CBP	No	265 kDa	6	4	0.7
19	Cytochrome b-c1 complex subunit 1, mitochondrial	Q9CZ13	QCR1	Yes	53 kDa	6	4	0.7
20	Phosphate carrier protein, mitochondrial	Q8VEM8	MPCP	Yes	40 kDa	6	4	0.7
21	Pyruvate kinase isozymes M1/M2	P52480	KPYM	No	58 kDa	12	8	0.7
22	Stress-70 protein, mitochondrial	P38647	GRP75	Yes	74 kDa	12	8	0.7
23	Tubulin beta-4B chain	P68372	TBB4B	No	50 kDa	3	2	0.7
24	Aspartate aminotransferase, mitochondrial	P05202	AATM	Yes	47 kDa	166	113	0.7
25	60 kDa heat shock protein, mitochondrial	P63038	CH60	Yes	61 kDa	14	10	0.7
26	ATP synthase subunit d, mitochondrial	Q9DCX2	ATP5H	Yes	19 kDa	22	16	0.7
27	Dynamin-1	P39053	DYN1	No	98 kDa	12	9	0.8
28	ATP synthase subunit O, mitochondrial	Q9DB20	ATPO	Yes	23 kDa	13	10	0.8
29	Cytochrome c, somatic	P62897	CYC	Yes	12 kDa	5	4	0.8
30	Heat shock cognate 71 kDa protein	P63017	HSP7C	No	71 kDa	6	5	0.8
31	Transcriptional activator protein Pur-alpha	P42669	PURA	No	35 kDa	6	5	0.8

32	Dihydrolipoyl dehydrogenase, mitochondrial	O08749	DLDH	Yes	54 kDa	30	28	0.9
33	Glyceraldehyde-3-phosphate dehydrogenase	P16858	G3P	No	36 kDa	7	8	1.1
34	Phosphoglycerate kinase 1	P09411	PGK1	No	45 kDa	12	14	1.2
35	Alpha-enolase	P17182	ENOA	No	47 kDa	6	8	1.3
36	Gamma-enolase	P17183	ENOG	No	47 kDa	3	4	1.3
37	Polyubiquitin-B	P0CG49	UBB	No	34 kDa	3	4	1.3
38	14-3-3 protein epsilon	P62259	1433E	No	29 kDa	2	3	1.5
39	Heat shock protein HSP 90-beta	P11499	HS90B	No	83 kDa	2	3	1.5
40	Pyruvate dehydrogenase E1 component subunit beta, mitochondrial	Q9D051	ODPB	Yes	39 kDa	2	3	1.5
41	Cysteine and glycine-rich protein 1	P97315	CSRP1	No	21 kDa	3	5	1.7
42	Cofilin-1	P18760	COF1	No	19 kDa	4	8	2
43	Fibrous sheath-interacting protein 2	A2ARZ3	FSIP2	No	785 kDa	1	2	2
44	Serum albumin	P07724	ALBU	No	69 kDa	1	2	2
45	Triosephosphate isomerase	P17751	TPIS	No	32 kDa	1	2	2
46	Protein DJ-1	Q99LX0	PARK7	No	20 kDa	2	7	3.5
47	Alpha-synuclein	O55042	SYUA	No	14 kDa	2	8	4
48	Fatty acid synthase	P19096	FAS	No	272 kDa	2	8	4
49	Tubulin alpha-1B chain	P05213	TBA1B	No	50 kDa	1	9	9