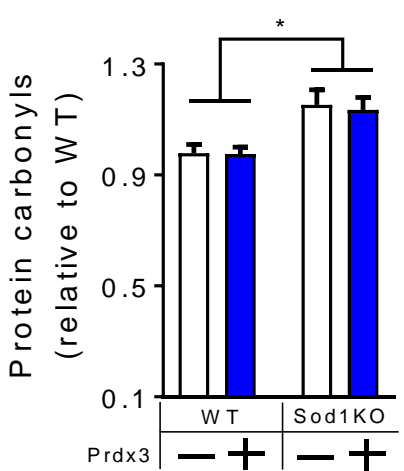
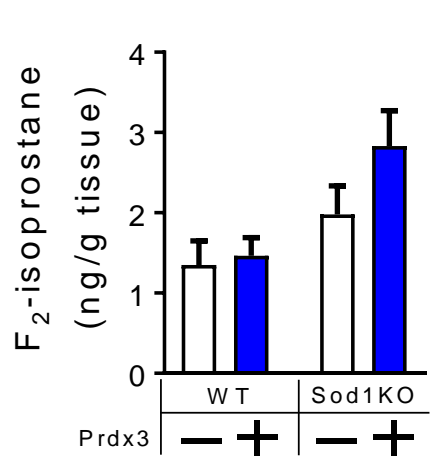


Figure S1

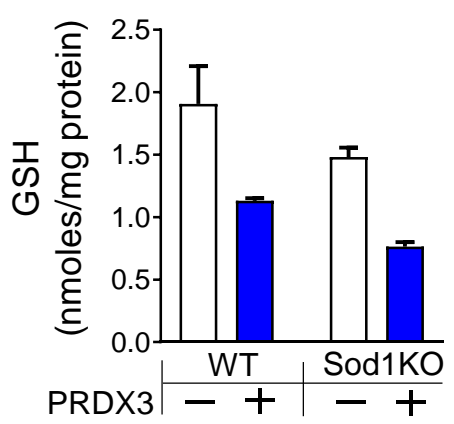
(A)



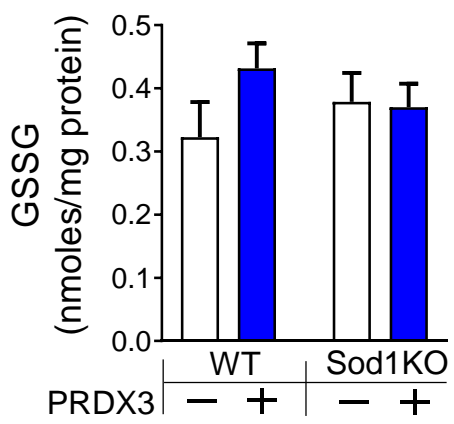
(B)



(D)



(E)



(F)

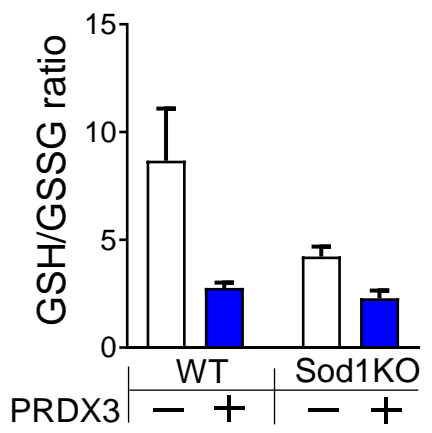


Figure S2

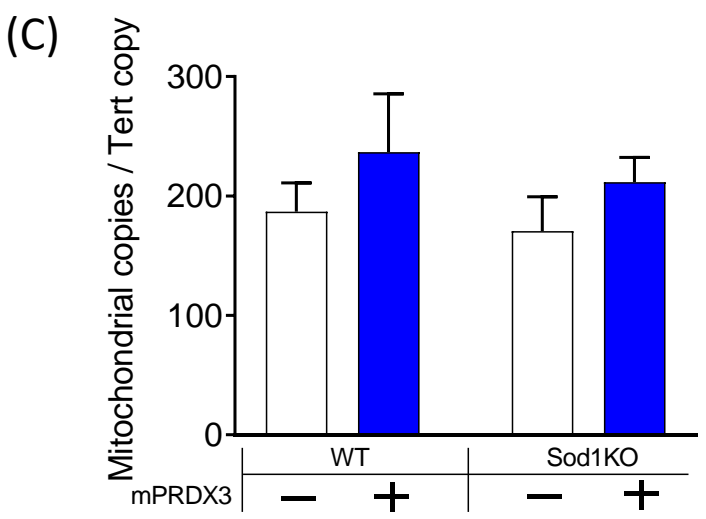
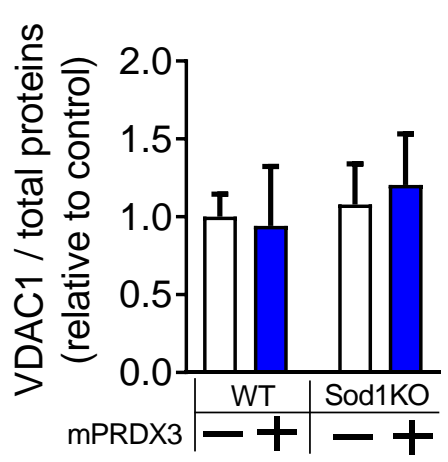
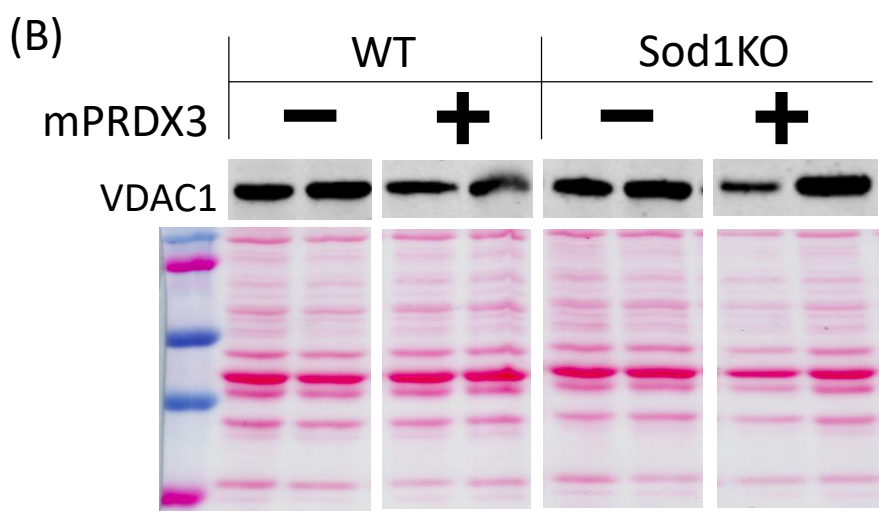
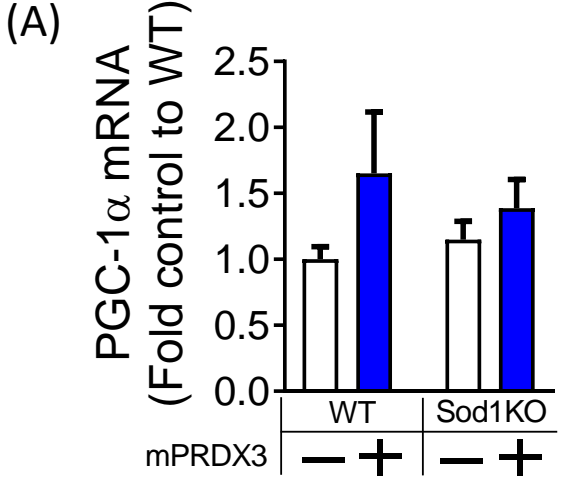


Figure S3

(A) Expression of proteins in muscle

Gene name	NCBI Gene ID	WT	WT-Prdx3Tg	<i>p-val</i>
Decr1	67460	0.33 ±0.06	0.46 ±0.07	0.047 *
Eno1	13806	0.24 ±0.03	0.41 ±0.05	0.014 *
Gpx4	625249	0.05 ±0.01	0.06 ±0.01	0.037 *
Gstm1	14862	2.23 ±0.31	3.16 ±0.32	0.040 *
HmgcL	15356	0.05 ±0.01	0.07 ±0.01	0.006 *
Hspa5	14828	0.13 ±0.02	0.18 ±0.01	0.004 *
Prdx3	11757	0.38 ±0.05	1.43 ±0.21	0.012 *
Slc25a20	57279	0.09 ±0.02	0.14 ±0.03	0.036 *

(B) Western Blots

Primary Antibodies	Company, Catalogue #	Ratio, incubation
Prdx3	Abcam, ab73349	1:1000, overnight
MuRF1	SCBT, sc-398608	1:500, overnight
MAFbx	SCBT, sc-166806	1:1000, overnight
Pax7	SCBT, sc-81975	1:1000, overnight
MyoD	SCBT, sc-377460	1:1000, overnight
Myogenin	SCBT, sc-52903	1:1000, overnight
Atkt-pan	CST, 4691	1:1000, overnight
pAkt-Thr	CST, 9275	1:1000, overnight
4EBP1	CST, 9644	1:1000, overnight

(C) qRT-PCR Primer Sequences

Gene Name	Forward Primer	Reverse Primer
hPrdx3	ACAGCCGTTGTCAATGGAGAG	ACGTCGTGAAATTCGTTAGCTT
mPrdx3	GCAGCTGCGGGAAGGTTGCT	TGCTGGGTGACAGCAGGGGT
PGC1a	CAGACCTGACACAACGCGGACAG	CCTGCGCAAGCTTCTCTGAGC
AchR-a	ACCTGGACCTATGACGGCTCT	AGTTACTCAGGTCGGGCTGGT
GADD45a	AGACCGAAAGGATGGACACG	GTACACGCCGACCGTAATG
Runx1	GATGGCACTCTGGTCACCG	GCCGCTCGGAAAAGGACAA
Sarcolipin	GAGGTGGAGAGACTGAGGTCCTTGG	GAAGCTCGGGGCACACAGCAG
MuRF1	ACCTGCTGGTGGAAAACATC	AGGAGCAAGTAGGCACCTCA
Atrogin1	GCAGAGAGTCGGCAAGTC	CAGGTCGGTGATCGTGAG
Myogenin	ACTCCCTTACGTCCATCGTG	CAGGACAGCCCCTTAAA
eMHC	GACTCAGCCGACACCATGAG	TTTTCCGACTTGCGGAGGAA