

REAGENT or RESOURCE	SOURCE	IDENTIFIER
<b>Antibodies</b>		
PPAR $\alpha$ : Rabbit polyclonal to PPAR alpha	Abcam	Ab24509
PPAR $\beta$ : Rabbit polyclonal to PPAR beta	Thermo Fisher Scientific	#PA1-823A
PPAR $\gamma$ : Rabbit polyclonal to PPAR gamma	Cell Signaling Technology	#2443
PGC1 $\alpha$ : Rabbit polyclonal to PGC1 alpha	Thermo Fisher Scientific	# PA5-38021
PGC1 $\beta$ : Rabbit polyclonal to PGC1 beta	Abcam	Ab176328
Mef2a: Rabbit polyclonal to Mef2a	Abcam	Ab86755
Mef2b: Rabbit polyclonal to Mef2b	Abcam	Ab33540
Mef2c: Rabbit monoclonal to Mef2c	Cell Signaling Technology	#5030
Mef2d: Rabbit polyclonal to MEF2D	Abcam	Ab32845
Myf5: Rabbit polyclonal to Myf5	Abcam	Ab125301
Myf6: Rabbit polyclonal to Myf6	Sigma-Aldrich	AV32135
Myh1: Rabbit polyclonal to MYH1	Abcam	Ab127539
Myh2: mouse monoclonal to Myh2	Santa Cruz Biotechnology	Sc-53059
Myh4: mouse monoclonal to Myh4	Thermo Fisher Scientific	#14-6503-82
Myh7: mouse monoclonal to Myh7	Santa Cruz Biotechnology	Sc-53090
MyoD: mouse monoclonal to MyoD	Thermo Fisher Scientific	<b>Cat #</b> MA1-41017
Tfam: Rabbit polyclonal to Tfam	Abcam	Ab131607
Nrf1: Rabbit monoclonal to Nrf1	Cell Signaling Technology	#46743
Ndufb2: Rabbit monoclonal to Ndufb2	Abcam	Ab186748
Ndufa3: Rabbit polyclonal to Ndufa3	Thermo Fisher Scientific	PA5-70571
Cox5b: Mouse monoclonal to Cox5b	Abcam	Ab110263
Cox7c: Rabbit polyclonal to Cox7c	Thermo Fisher Scientific	PA5-51284
Atp5o: Rabbit polyclonal to Atp5o	Thermo Fisher Scientific	PA5-68104
RPL26: Rabbit polyclonal to RPL26	Sigma	SAB2107642
Rabbit monoclonal to AKT1	Cell signaling	2938
Mouse monoclonal to AKT2	Thermo Fisher Scientific	MA1-034
Mouse monoclonal to AKT	Cell signaling	2920
Rabbit monoclonal to P-AKT(T308)	Cell signaling	4056
Rabbit monoclonal to P-AKT(S473)	Cell signaling	4060
Rabbit polyclonal to AMPK	Cell signaling	2532
Rabbit polyclonal to P-AMPK(T172/183)	Abcam	ab23875
Rabbit monoclonal to Foxo3a	Cell signaling	2497
Rabbit monoclonal to P-Foxo3a(S253)	Cell signaling	13129
Rabbit monoclonal to P-Foxo3a(S413)	Cell signaling	8174
Rabbit monoclonal to Foxo1	Cell signaling	2880
Mouse monoclonal to Puromycin	Kerafast	3RH11

mouse monoclonal to MAFbx	Santa Cruz Biotechnology	Sc-166806
mouse monoclonal to MURF1	Santa Cruz Biotechnology	Sc-398608
Rabbit polyclonal to S6K	Cell signaling	9202
Rabbit polyclonal to P-S6K(T389)	Cell signaling	9205
Rabbit polyclonal to 4E-BP1	Cell signaling	9452
Rabbit polyclonal to P-4EBP1(T37/46):	Cell signaling	9459
Rabbit polyclonal to P-4EBP1(S65)	Cell signaling	9451
mouse monoclonal to Insulin Receptor $\beta$	Cell signaling	3025
Rabbit polyclonal to P-InsRec (T1131)	Cell signaling	3021
Rabbit polyclonal to Gsk3 $\alpha$	Cell signaling	9338
Rabbit polyclonal to P-Gsk3 $\alpha$ (S21)	Cell signaling	8452
Rabbit monoclonal to Gsk3 $\beta$	Cell signaling	12456
Rabbit polyclonal to P-Gsk3 $\beta$ (S9)	Cell signaling	9336
Rabbit polyclonal to eIf2B $\epsilon$	Cell signaling	3595
Rabbit polyclonal to P-eIf2B $\epsilon$ (S540)	Cell signaling	3596
Rabbit polyclonal to P- eIf2B $\epsilon$ (S536)	Thermo Fisher Invitrogen	44-530G
Rabbit polyclonal to IGF1R	Cell signaling	3027
Rabbit polyclonal to P-IGF1R(T1316)	Cell signaling	6113
Rabbit polyclonal to IRS1	Cell signaling	2390
Rabbit polyclonal to P-IRS(Y608)	Millipore	09-432
mouse monoclonal to S6	Cell signaling	2317
Rabbit polyclonal to p-S6(S240/244)	Cell signaling	2215
Chemicals, Peptides, and Recombinant Proteins		
D-Glucose	Sigma-Aldrich	G8279
Humulin® R U-100	Eli Lilly	U-100
Phosphate buffered saline (PBS)	Boston BioProducts	BM-220
Tissue-Tek® O.C.T. compound 4583	VWR	25608-930
Bovine Serum Albumin (BSA)	Sigma-Aldrich	A7906
Isoflurane, USP	Piramal Healthcare	NDC 66794-017-10
Paraformaldehyde 16% solution, EM Grade	Electron Microscopy Sciences	15710
Sodium meta-periodate	Fischer Scientific	S398-100
L-Lysine Hydrochloride	Fischer Scientific	BP386-100
Vectashield with DAPI	Vector Laboratories, Inc	H-1200
Phosphatase inhibitor cocktail set	Millipore	524625
NuPAGE™ 4-12% Bis-Tris Protein Gels	Invitrogen	NP0321BOX
Potassium chloride	Sigma Aldrich	P9333
Magnesium chloride	Sigma Aldrich	M9272
Ethylenediaminetetraacetic acid (EDTA)	Sigma Aldrich	EDS
Glycerol	Sigma Aldrich	G5516
Triton X-100	Sigma Aldrich	X-100
Trizma® base	Sigma Aldrich	T1503
Hydrochloric acid	Sigma Aldrich	320331
Dithiothreitol (DTT)	Sigma Aldrich	D0632
Puromycin	InVivoGen	ANT-PR-1

Ketamine		
Xylacine		
Brilliant Blue R	Sigma Aldrich	B0149
RNase Inhibitor	ThermoFisher Scientific	N8080119
Cycloheximide	Sigma Aldrich	C7698
Pierce Protease Inhibitor tablets	ThermoFisher Scientific	A32963
Sucrose	Sigma Aldrich	S9378
TRIzol™ Reagent	Invitrogen	15596026
Collagenase A	Sigma Aldrich	10103578001
FFA-free BSA solution	Sigma Aldrich	A9205
Dulbecco's Modified Eagle Medium (DMEM)	ThermoFisher Scientific	11995-040
Gentamycin	ThermoFisher Scientific	15750060
Penicillin-Streptomycin	ThermoFisher Scientific	15140122
FBS	Sigma Aldrich	F6178
L-carnitine inner salt	Sigma Aldrich	C0158
Sodium chloride	Sigma Aldrich	S7653
Calcium chloride	Sigma Aldrich	C3881
Potassium phosphate monobasic	Sigma Aldrich	P5655
HEPES	Sigma Aldrich	H3375
Potassium hydroxide	Sigma Aldrich	221473
D-glucose	Sigma Aldrich	G7528
Ethanol 190 proof	Decon labs	2801
Etomoxir	Cayman Chemical Company Inc	11969
Matrigel® Matrix	Corning	354230
Sodium oleate	Sigma Aldrich	O3880
Carbonyl cyanide 4-(trifluoromethoxy)phenylhydrazone (FCCP)	Sigma Aldrich	C2920
Antimycin A from Streptomyces sp.	Sigma Aldrich	A8674
Rotenone	Sigma Aldrich	R8875
Oligomycin A	Sigma Aldrich	75351
Palmitic acid	Sigma Aldrich	P0500
Palmitic acid, [1- <sup>14</sup> C]	Moravek Ink	MC121
Perchloric acid 70%	Sigma Aldrich	311421
Sodium hydroxide	Sigma Aldrich	221465
Seahorse XF24 FluxPak Cell culture Microplates	Agilent	100850-001
Coenzyme A	Sigma Aldrich	C4780
DL-Malic acid	Sigma Aldrich	M1210
Bovine Serum Albumin	Sigma Aldrich	A2153
MOPS	Sigma Aldrich	M1254
Ethylene glycol-bis(2-aminoethylether)-N,N,N',N'-tetraacetic acid (EGTA)	Sigma Aldrich	E3889
Trypsin-EDTA (0.25%), phenol red	ThermoFisher Scientific	25200-056
Nicotinamide (NAM)	Sigma Aldrich	72340
Trichostatin A (TSA)	Sigma Aldrich	T8552

Adenosine 5'-triphosphate (ATP)	Sigma Aldrich	A7699
UniverSol™-ES Liquid Scintillation Cocktail	MP Biomedicals	IC88248001
<b>Critical Commercial Assays</b>		
Mouse IGF-2 PicoKine™ ELISA Kit	Boster Biological Technology	EK0381
Mouse IGF-I ELISA Kit	Sigma-Aldrich	RAB0229
iTaq™ Universal SYBR® Green Supermix	BioRad	1725121
Pierce™ BCA Protein Assay Kit	ThermoFisher Scientific	23225
<b>Deposited Data</b>		
RNAseq of of Imp2ff and Im2ff/MCKcre+/- gastrocnemius+soleus	GEO: GSE119801	
<b>Experimental Models: Organisms/Strains</b>		
C57BL/6J mice	The Jackson Laboratory	000664
B6.FVB(129S4)-Tg(Ckmm-cre)5Khn/J mice	The Jackson Laboratory	006475
IMP2 <sup>fllox</sup> mice	Kind gift from Liliana Minichiello	N/A
<b>Oligonucleotides</b>		
Table of PCR primers-follows		
Software and Algorithms		
Expedata-P Data Analysis Software	Sable Systems International	<a href="https://www.sablesys.com/products/classic-line/expedata-p-data-analysis-software/">https://www.sablesys.com/products/classic-line/expedata-p-data-analysis-software/</a>
Volocity 6.3	Perkin Elmer	<a href="http://www.perkinelmer.com/lab-products-and-services/resources/cellular-imaging-software-downloads.html#Volocity">http://www.perkinelmer.com/lab-products-and-services/resources/cellular-imaging-software-downloads.html#Volocity</a>
STAR RNA-seq aligner	Dobin et al., 2013	<a href="https://code.google.com/archive/p/rna-star/">https://code.google.com/archive/p/rna-star/</a>
HTSeq-count		
		Anders

EdgeR	Robinson et al., 2010	<a href="https://bioconductor.org/packages/release/bioc/html/edgeR.html">https://bioconductor.org/packages/release/bioc/html/edgeR.html</a>	
R	R Core Team, 2018	<a href="https://www.R-project.org/">https://www.R-project.org/</a>	
Other			
Prolab <sup>®</sup> Isopro <sup>®</sup> RMH 3000, irradiated	PMI nutrition international	0006972	
Rodent Diet With 60 kcal% Fat, irradiated	Research Diets Inc.	D12492i	
Promethion Metabolic Analyzer			Sable & Interna
EchoMRI Analyzer EMR-153	Echo Medical Systems	<a href="http://www.echomri.com/Default.aspx">http://www.echomri.com/Default.aspx</a>	
Treadmill	Columbus instruments	<a href="http://www.colinst.com/products/treadmill">http://www.colinst.com/products/treadmill</a>	
Lactate Plus Lactate Test Strips	Nova biomedical	40813	
Bayer Contour next Blood glucose test strips	Bayer	7309	
AlphaTrak2 blood glucose test strips	Zoetis	71681-01	
Leica CM3050S microtome	Leica Biosystems	<a href="https://www.leicabiosystems.com/histology-equipment/cryostats/products/leica-cm3050-s/">https://www.leicabiosystems.com/histology-equipment/cryostats/products/leica-cm3050-s/</a>	
Denville UltraClear Microscope Slides			Denville Inc.
Sarstedt Inc SC Micro tube 1.3ml K3 EDTA	Fischer Scientific	NC9414041	
Amicon Ultra-0.5 mL Centrifugal Filters	Millipore Sigma	UFC500324	
Illumina HiSeq2500	Illumina	<a href="https://www.illumina.com/systems/sequencing-platforms/hiseq-2500.html">https://www.illumina.com/systems/sequencing-platforms/hiseq-2500.html</a>	
CFX96 Touch™ Real-Time PCR Detection System	Bio Rad	<a href="http://www.bio-rad.com/en-us/product/cfx96-touch-real-time-pcr-detection-system?ID=LJB1YU15">http://www.bio-rad.com/en-us/product/cfx96-touch-real-time-pcr-detection-system?ID=LJB1YU15</a>	
TissuLyser II	Qiagen	<a href="https://www.qiagen.com/us/search/tissuelyser-ii/">https://www.qiagen.com/us/search/tissuelyser-ii/</a>	
2100 Bioanalyzer Instruments	Agilent	<a href="https://www.genomics.agilent.com/en/Bioanalyzer-System/2100-Bioanalyzer-Instruments/?cid=AG-PT-106">https://www.genomics.agilent.com/en/Bioanalyzer-System/2100-Bioanalyzer-Instruments/?cid=AG-PT-106</a>	
Thermomixer 5350	Eppendorf	5350 21115	
Beckman Coulter LS6500 Liquid Scintillation Counter	Beckman Coulter	8043-30-1194	

Whatman™ Grade P81	GE Healthcare	WHAT3668-915
15 mL Tg, Potter-ELV, Serrated Pestle	Wheaton®	357984
Glass stirring rod	Frey Scientific	525526

	PCR primers	
Gene	Forward	Reverse
PPAR $\alpha$	TCGAGGAAGGCACTACACCT	TCTTCCCAAAGCTCCTTCAA
PPAR $\beta$	GGTTGACCTGCAGATGGAAT	TGGAGCTCGATGACAGTGAC
PPAR $\gamma$	CGCTGATGCACTGCCTATGA	AGAGGTCCACAGAGCTGATTCC
PGC1 $\alpha$	GAATCAAGCCACTACAGACACCG	CATCCCTCTTGAGCCTTTCGTG
PGC1 $\beta$	TGGAAAGCCCCTGTGAGAGT	TTGTATGGAGGTGTGGTGGG
Mef2a	GTGTACTIONCAGCAATGCCGAC	AACCCTGAGATAACTGCCCTC
Mef2b	GCAACGCCTCTTCCAGTATG	AGTGTCTCAGCAGCTTCTC
Mef2c	TGCTGGTCTCACCTGGTAAC	ATCCTTTGATTCAGTATGGCAT
Mef2d	CAGCAGCCACCTCAGCAACA	CCAAGTATCCAGCCGCATCC
Myf5	CTGCTCTGAGCCCACCAG	GACAGGGCTGTTACATTACAGG
Myf6	TGCTAAGGAAGGAGGAGCAA	CCTGCTGGGTGAAGAATGTT
Myh1	CTTCAACCACCACATGTTTCG	AGGTTTGGGCTTTTGGAAAGT
Myh2	AAAGCTCCAAGGACCCTCTT	AGCTCATGACTGCTGAACTCAC
Myh4	GCAGGACTTGGTGGACAAAC	CAGCTTGTGACCTGGGACT
Myh7	GCCAACTATGCTGGAGCTGATGCCC	GGTGCCTGGAGCGCAAGTTTGTTCATAAG
MyoD	CTTCTACGCACCTGGACCG	ACTGTAGTAGGCGGTGTCGT
MyoG	CTTGCTCAGCTCCCTCAACC	GTTGGGACCGAACTCCAGTG
Tnni1	CTGGGCTCTAAGCACAAGGT	ATGCCAGACATAGCCTCCAC
Tnni2	CCTGAAGCAGGTCAAGAAGG	TCCATGCCAGACTTCTCCTC
Tfam	CAAGTCAGCTGATGGGTATGG	TTTCCCTGAGCCGAATCATCC
Nrf1	CAGCACCTTTGGAGAATGTG	CCTGGGTCATTTTGTCCACA
Nrf2	GATCCGCCAGCTACTCCCAGGTTG	CAGGGCAAGCGACTCATGGTCATC
Ndufb2	CAGGTGATCCAGGGTGAGTT	CTCGTCATCAGGAGGGATTC
Ndufa3	ATGGCCGGGAGAATCTCTG	AGGGGCTAATCATGGGCATAAT
Cox5b	CAAGGTTACTTCGCGGAGTG	TCCTTGGTGCCTGAAGCTG
Cox7c	AGCATGTTGGGCCAGAGT	ACTGAAAACGGCAAATTCTT
Atp5o	TCTCGACAGGTTCCGGAGCTT	AGAGTACAGGGCGGTTGCATA
CD36	GCTTGCAACTGTCAGCACAT	GCCTTGCTGTAGCCAAGAAC
IGF2	CGGACCGAGCCAGGGACGA	GCCGGCTGGAAGGGAGGAA
18s rRNA	GTAACCCGTTGAACCCATT	CCATCCAATCGGTAGTAGCG
Acaa2	GCC TCC ACT CAC ATT GGT TT	ATT GAA GAA AGC TGG GCT GA
Acadl	TGTATCGGTGCCATAGCCA	CCATTAGTGATGAACACCTTGC
Acadm	TGGTATTTCTTGTGGCAGG	CACATTTTCTTAGGCACTCTG
Acadvl	GGAGGACGACACTTTGCAGG	AGCGAGCATACTGGGTATTAGA
Acox1	ACTCGCTGAAGGTGCTGCTCTC	GTGCTGTCATGCGTTGGAAGTC

Cpt1b	AAGGAATGCAGGTCCACATC	CCAGGCTACAGTGGGACATT
Cpt2	GCTCCGAGGCATTTGTC	CATCGCTGCTTCTTTGGT
Fabp3	AGAGTTCGACGAGGTGACAGCA	TTGTCTCCTGCCCGTTCCACTT
Hadha	TGCATTTGCCGCAGCTTTAC	GTTGGCCAGATTTTCGTTCA
Lpl	ATCGGAGAACTGCTCATGATGA	CGGATCCTCTCGATGACGAA
MCAD	GTACCCGTTCCCTCTCATCAAA	CTCCGTCATCTCCCAAATAC
GAPDH	CTGGAGAAACCTGCCAAGTA	TGTTGCTGTAGCCGTATTCA
Cux2	TCAGTCAACAGCTCCATTCG	GACAGCGAGAAAGTCCTTGG
Lbx2	ATGGGTACCCGAAGCACCTTCTGCACCGC	GCGAATTCAATCGTCCACCTGTATCTCCTC
NPFF	CTGCTACTGCTGCTGCTGAATTG	CAGGAAGGCTGGGCTCCTTCT
Slc16a9	CCCAATATCTACTTTCTGTTT	CGTCGCTGTGTATAATAG
Adora2b	TGCATGCCATCAACTGTATC	TGGAAACTGTAGCGGAAGTC
Uqcrc2	CCCATCTTGCTTTGCTGTCTG	AATAAAATCTCGAGAAGGACCCG
Lars2	ATCCAGTGGA TCAAACAGTG	GTACCACTCTGGGAGGTCT
$\beta$ -actin	TGTCCACCTTCCAGCAGATGT	AGCTCAGTAACAGTCCGCCTAGA
MHC-I	CTCCCAAGGAGAGACGACTG	TTAAGCAGGTCGGCTGAGTT
MHC-IIa	AAAGCTCCAAGGACCCTCTT	AGCTCATGACTGCTGAACTCAC
MHC-IIb	TGGCCGAGCAAGAGCTAC	TTGATGAGGCTGGTGTCTG
MHC-IIx	AATCAAAGGTCAAGGCCTACAA	GAATTTGCCAGGTTGACAT