

Supplementary Table S1

	Forward Primer	Reverse Primer
MAP1-LC3b (1)	cactgctctgtcttgttaggtg	tcgttgccctttattagtgcac
Murf-1	acctgctggaggaaaacac	cttcgtgttccttgccacac
FoxO3	accttcgtctctgaactcctg	ctgtggctgagtgagctgaag
Atrogin 1 (1)	gcaaacactgccacattctctc	cttgaggggaaagtgagacg
BNIP3 (1)	ttccactagcacctctgatga	gaacaccgcattacagaacaa
DRP1	gttcacgccaacagaatac	cctaaccctgaatgaagt
Fis1	aagtatgtgcgaggctgt	tgctaccagtccatcttc
β-actin (1)	ctggctctagcaccatgaagat	ggtggacagtgaggccaggat

REFERENCE:

1. Mammucari C, Milan G, Romanello V, Masiero E, Rudolf R, *et al.* (2007) FoxO3 Controls Autophagy in Skeletal Muscle In Vivo *Cell Metab* 6: 458-471.

Supplementary Table S2

TARGET GENE	TARGET SEQUENCE	EFFICIENCY OF PROTEIN KNOCKDOWN
FoxO3 (oligo 1)	tgaaggcagggcaagagc (1)	95%
FoxO3 (oligo 2)	ggaaatgctcctcgcgcg (1)	95%
Bnip3 (oligo 1)	cagctcctctctattta (2)	90%
Bnip3 (oligo 2)	taccaacagagctgaaata (1)	80%
Lac Z	gactacacaaatcagcgattt (1)	-
AMPK alpha	gagaagcagaagcagcagc	90%
Fis1(oligo 4)	gggcaactaccggctcaagga Invitrogen BLOCK-IT™ miR RNAi Select Mmi559435	90%
miR-scramble	gtctccagcgcagtacattt	-

Quantification of knockdown was performed considering the efficiency of transfection and the percentage of target protein decrease

REFERENCES:

1. Mammucari C, Milan G, Romanello V, Masiero E, Rudolf R, *et al.* (2007) FoxO3 Controls Autophagy in Skeletal Muscle In Vivo *Cell Metab* 6: 458-471.
2. Hamacher-Brady A, Brady NR, Logue SE, Sayen MR, Jinno M, *et al.* (2007) Response to myocardial ischemia/reperfusion injury involves Bnip3 and autophagy *Cell Death Differ* 14: 146-157

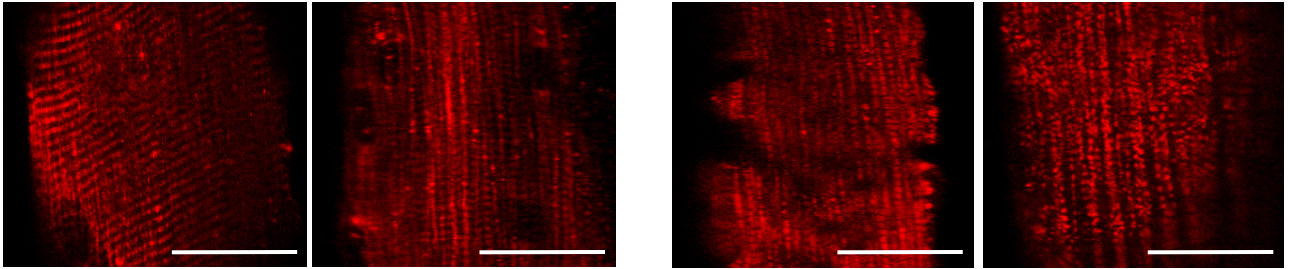
Supplementary Figure S1

Atg7 KO

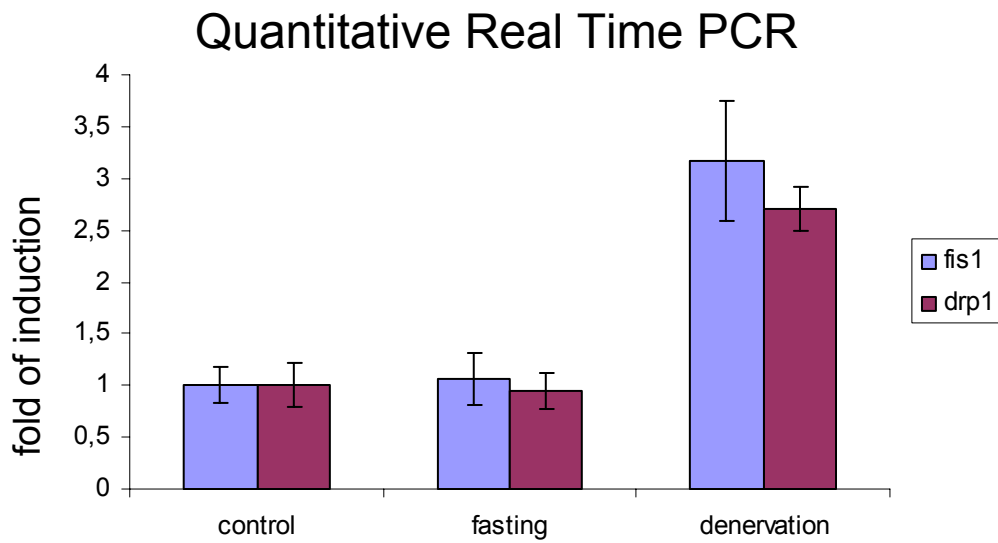
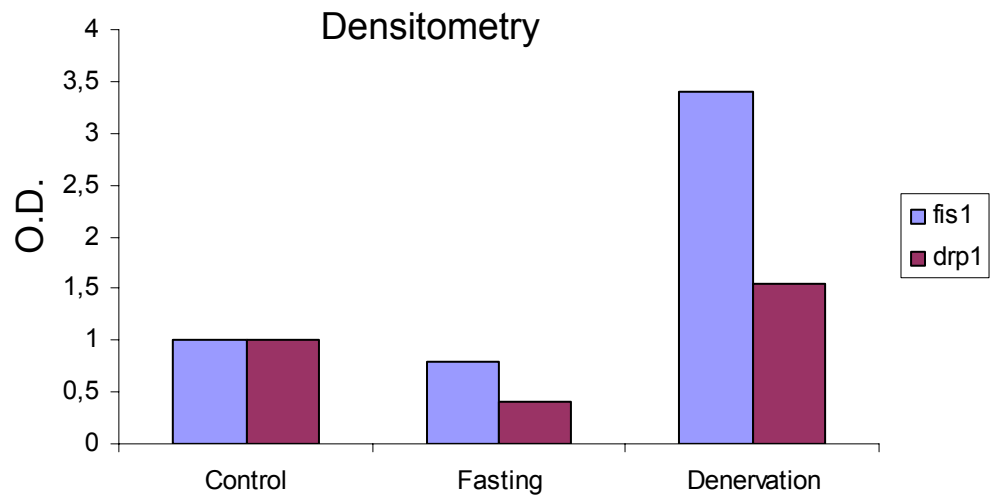
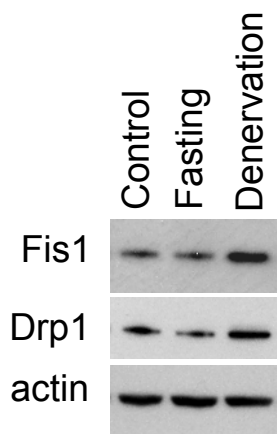
Fed

Fasting

pDsRed2-Mito

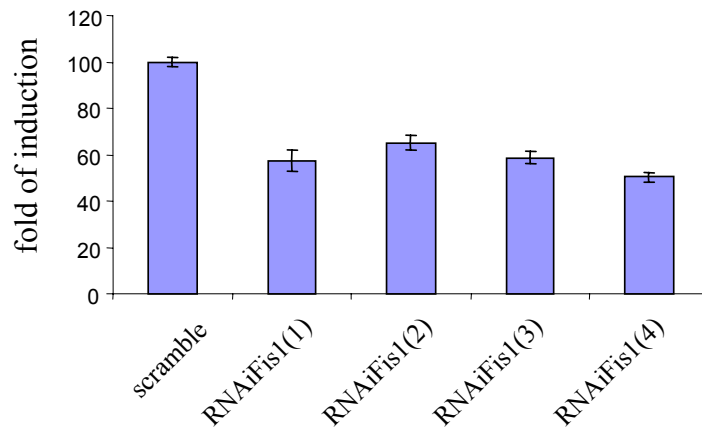


Supplementary Figure S2

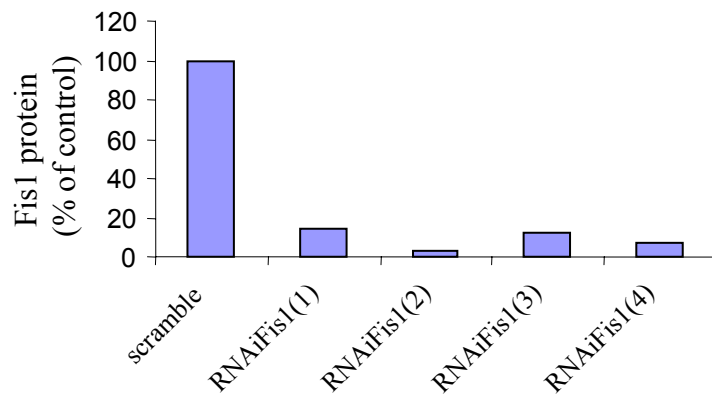


Supplementary Figure S3

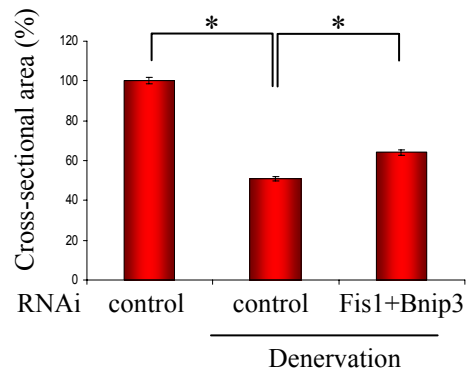
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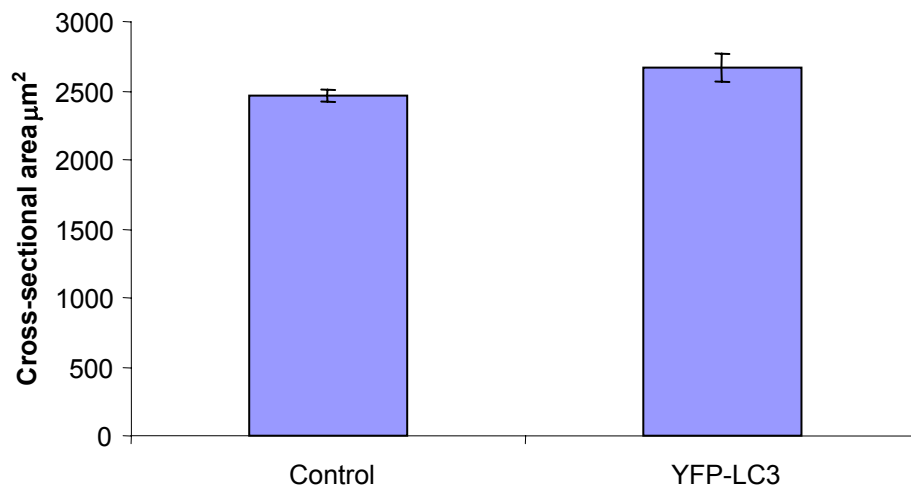
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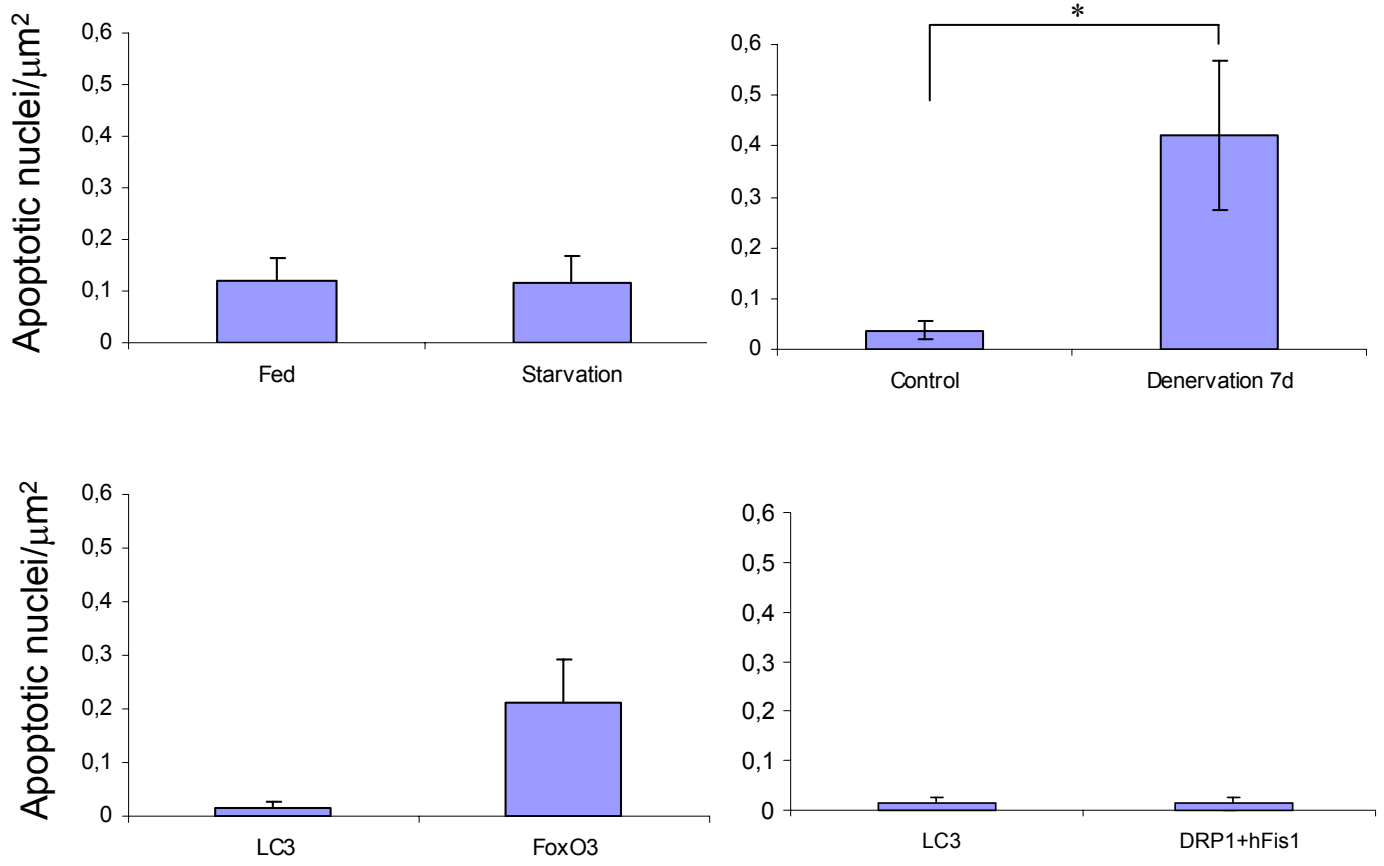
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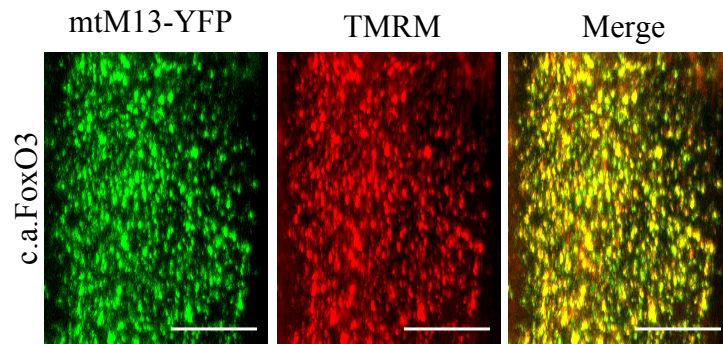
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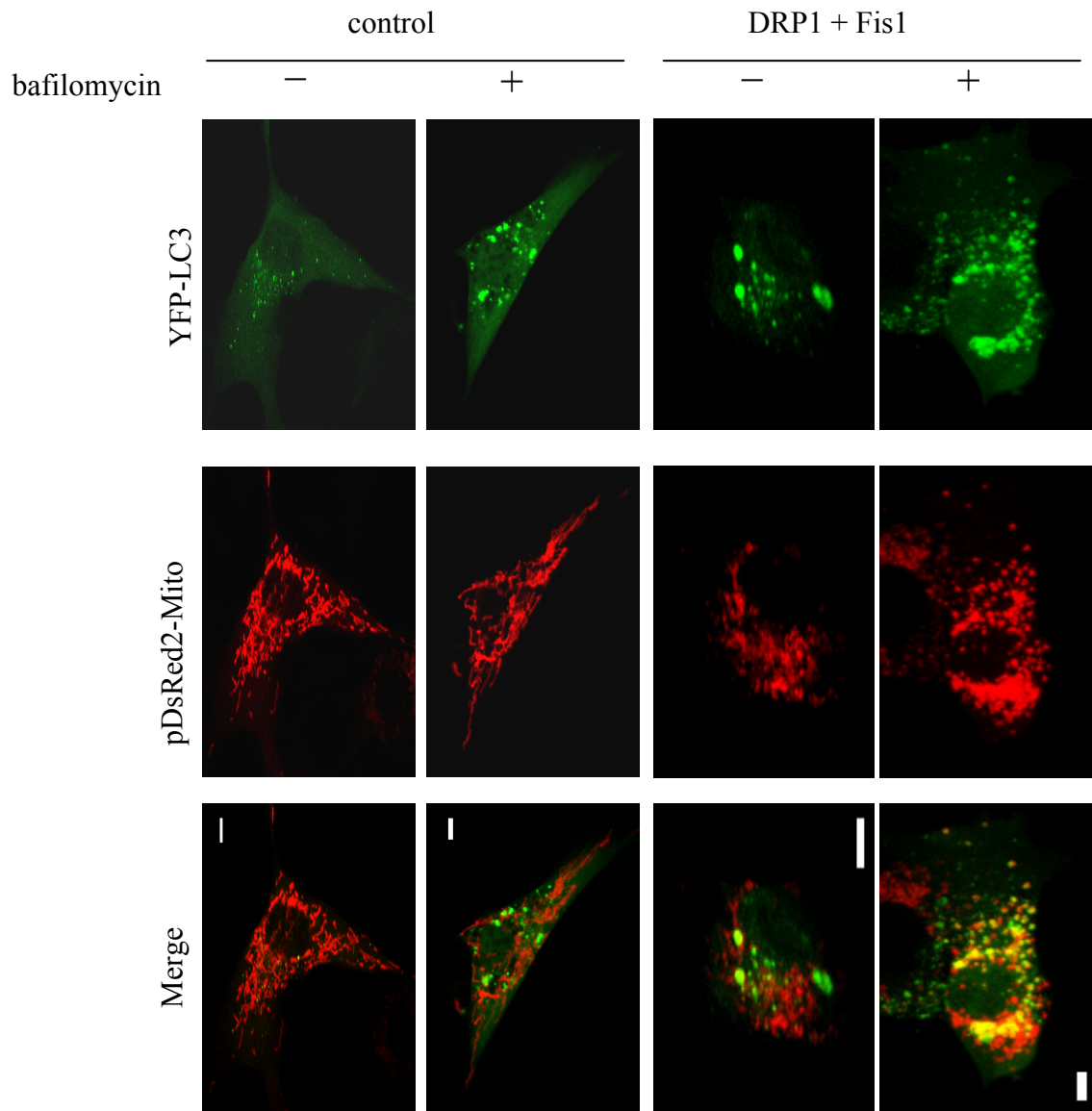
Supplementary Figure S6



Supplementary Figure S7

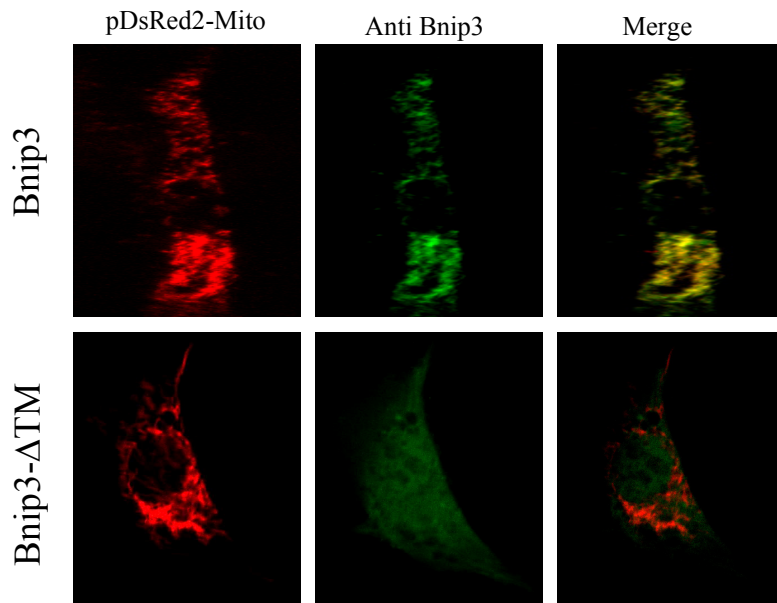


Supplementary Figure S8

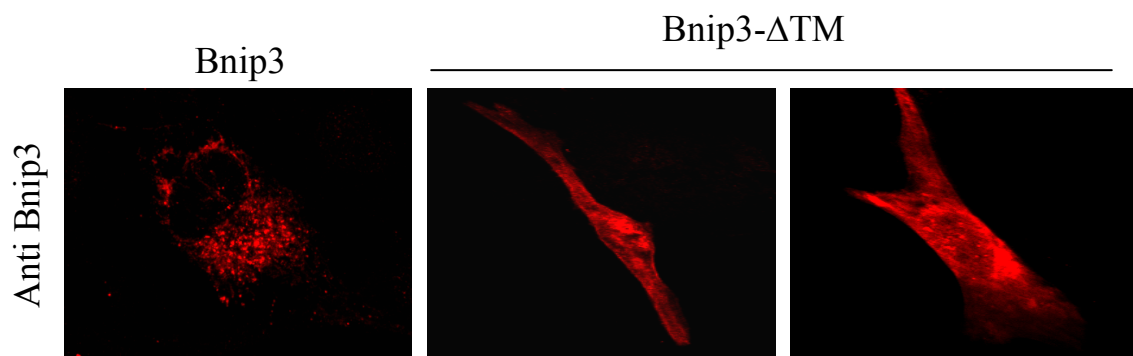


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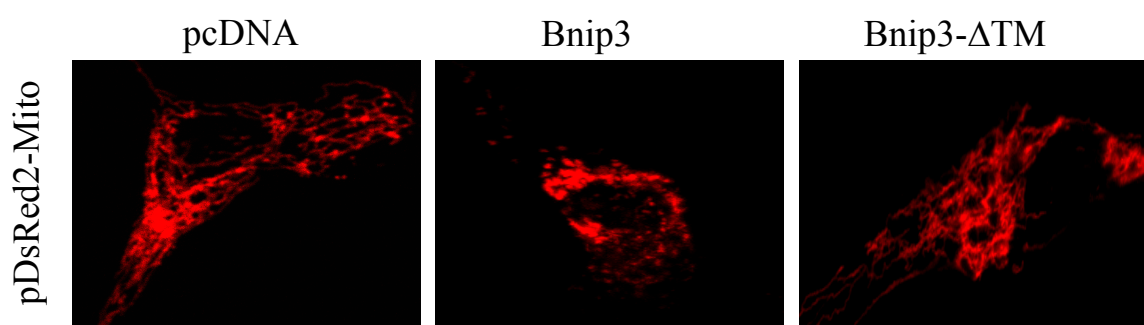
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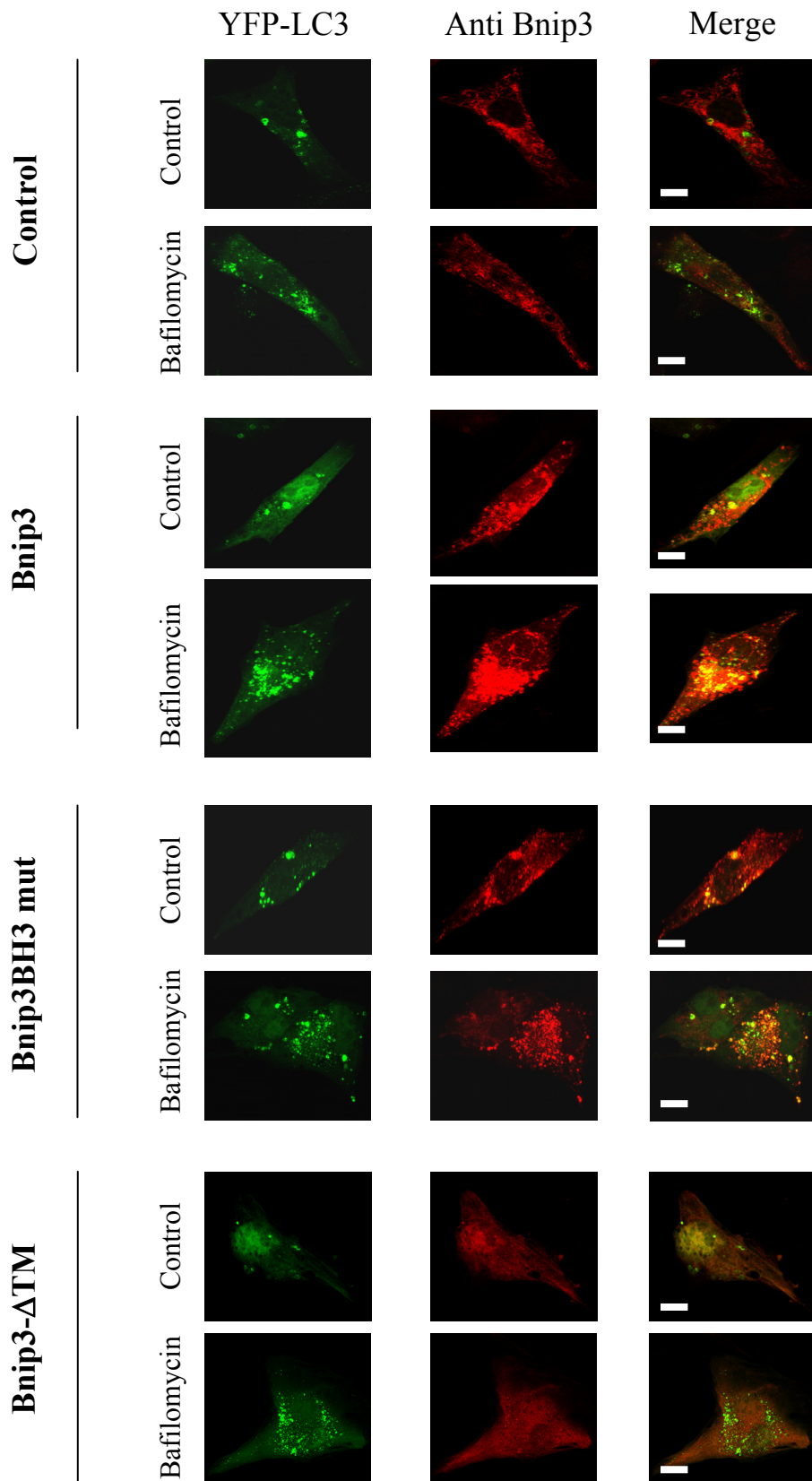
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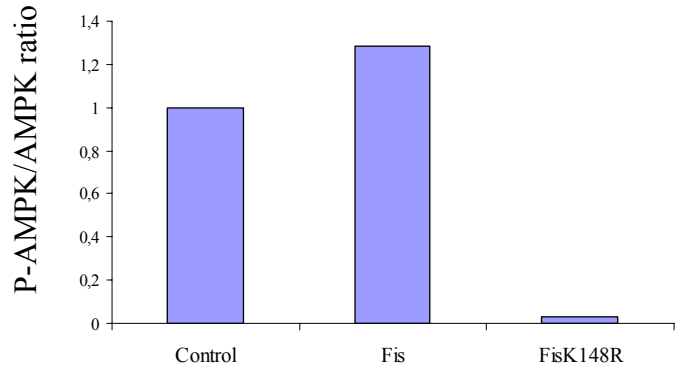
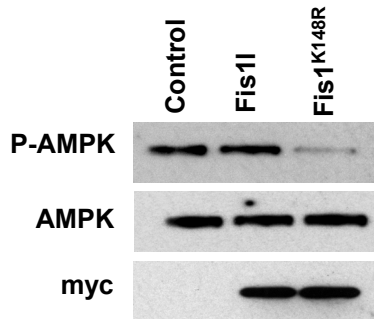
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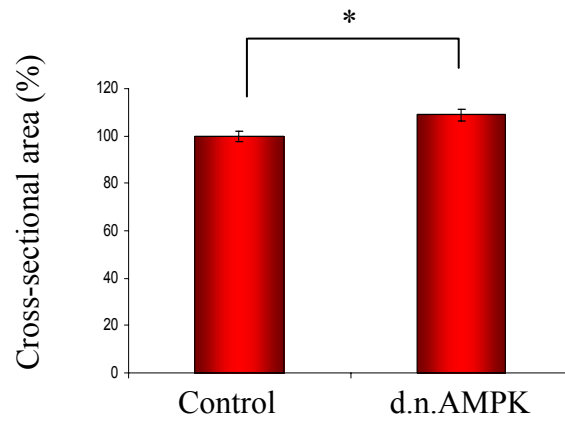
Supplementary Figure S10



Supplementary Figure S11

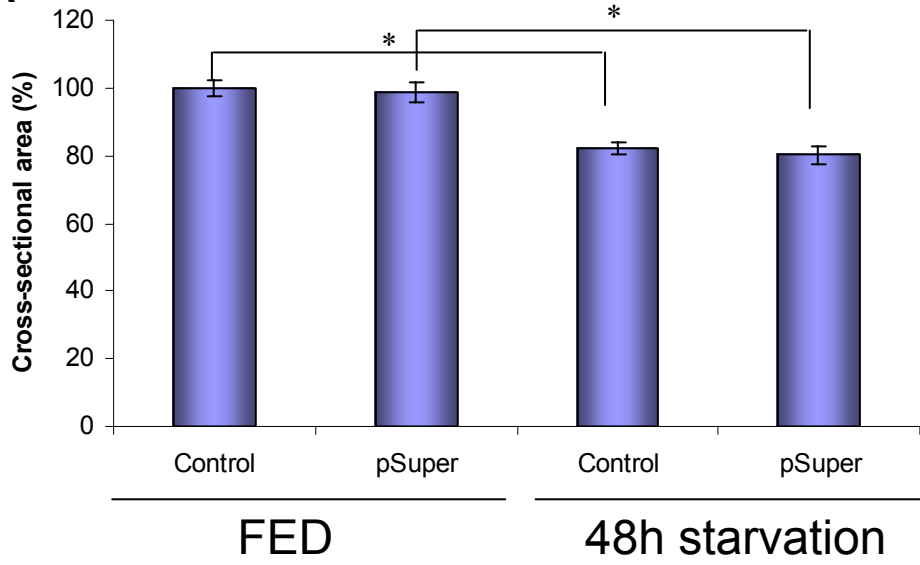


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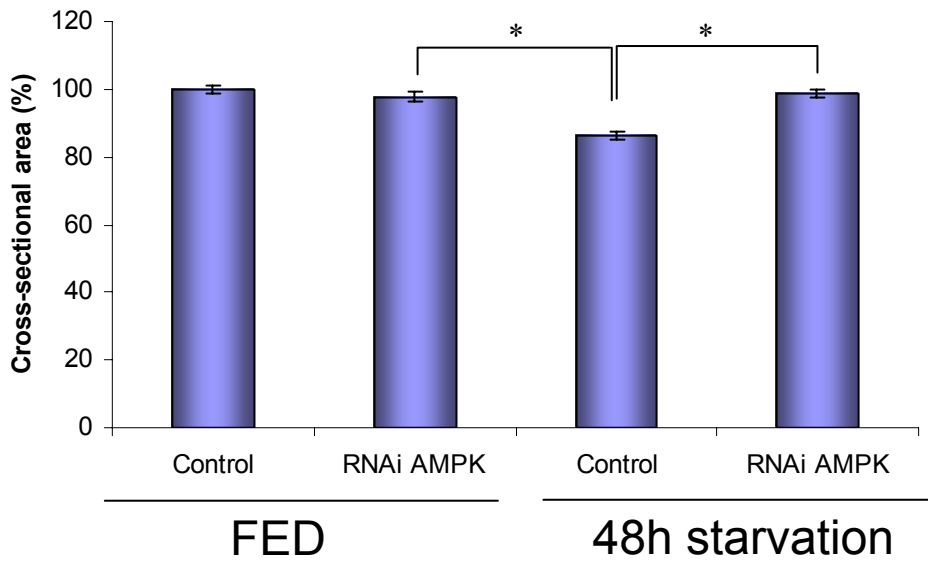


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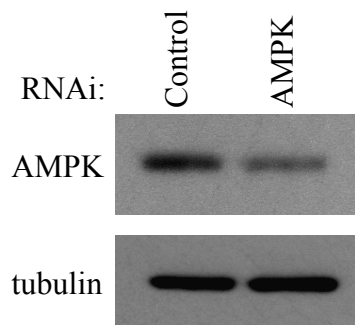
A



B



C



Supplementary Figure S14

