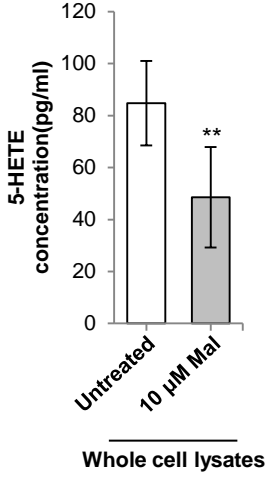
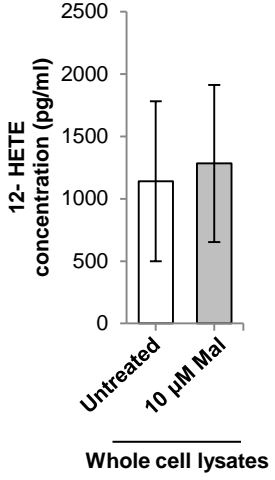
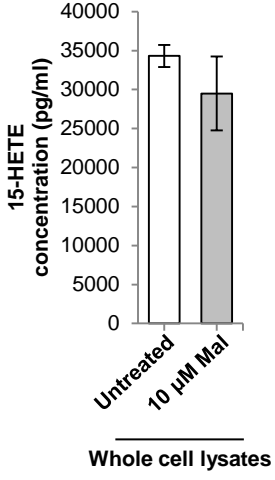
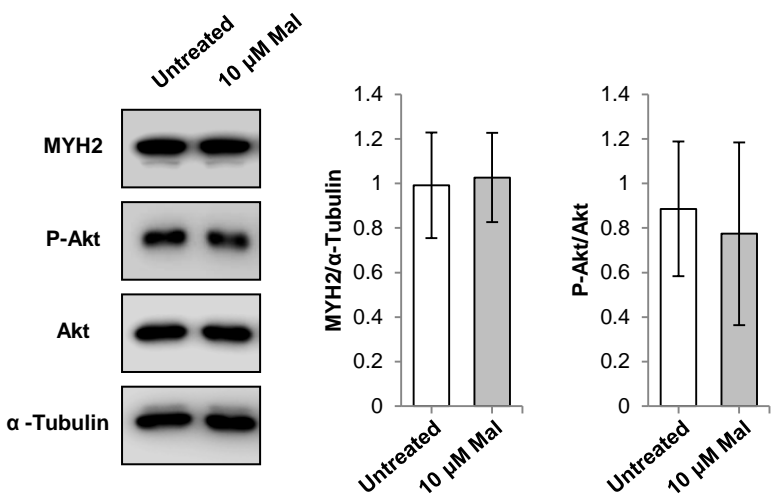


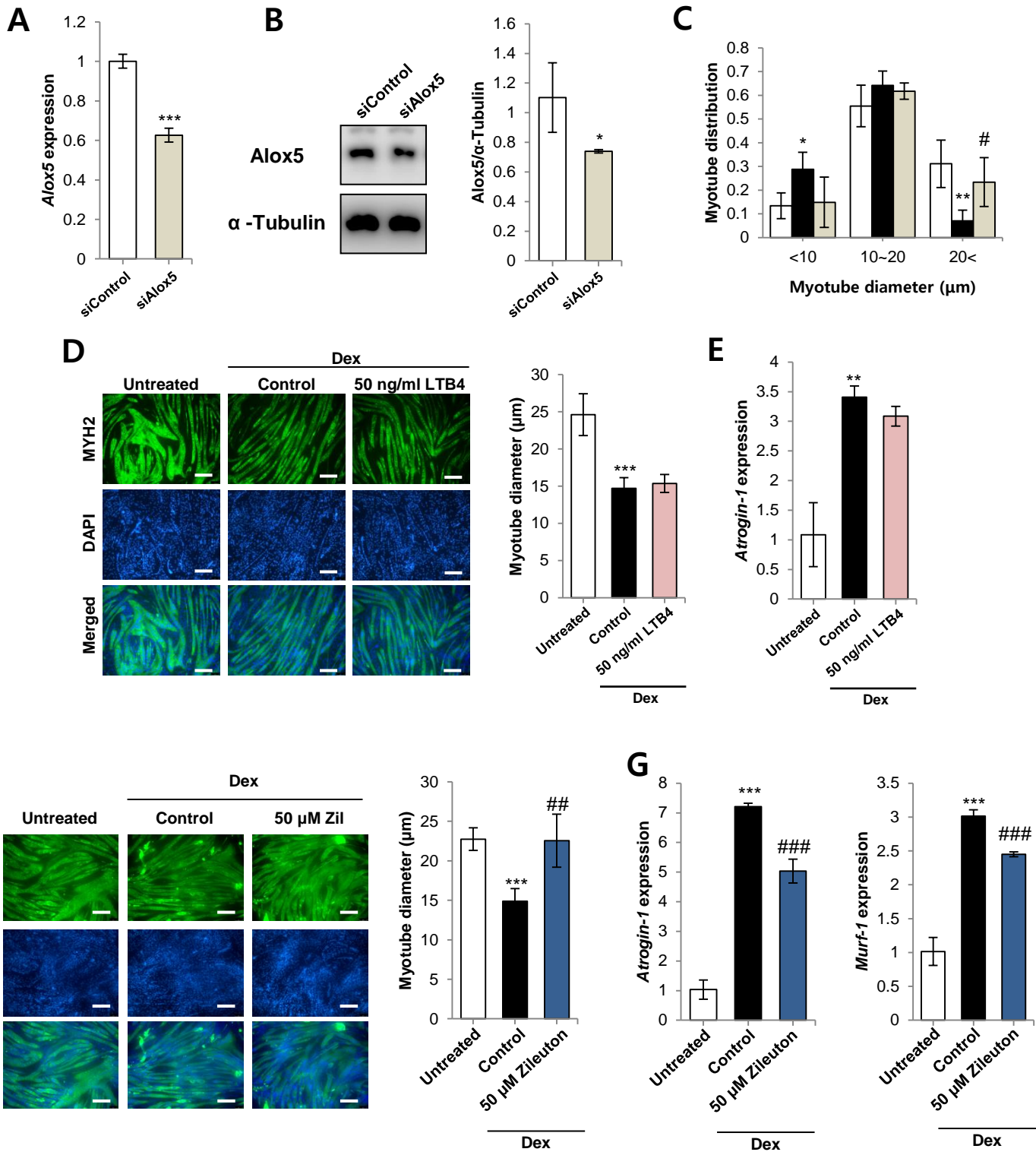
# Supplementary Figure 1



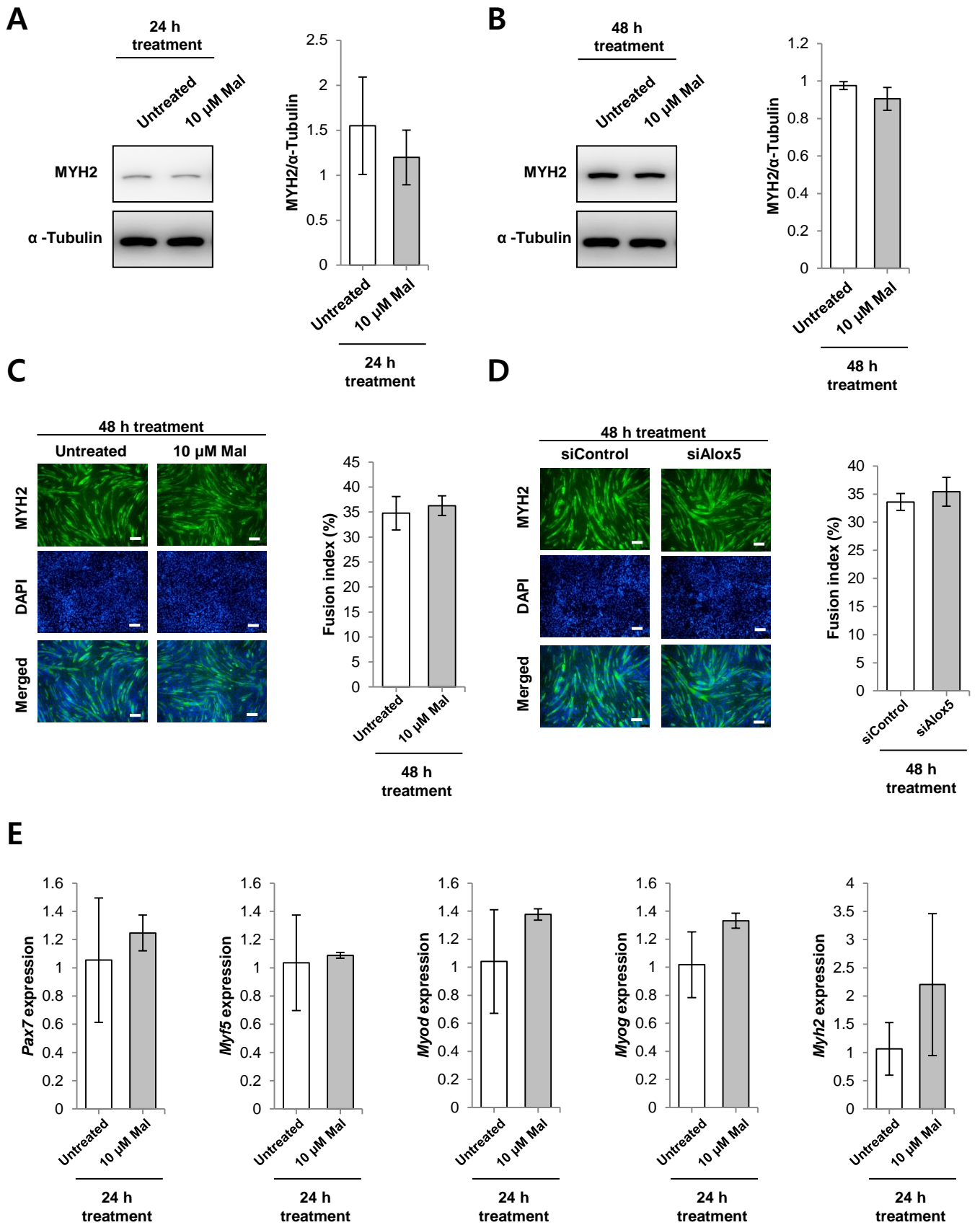
# Supplementary Figure 2



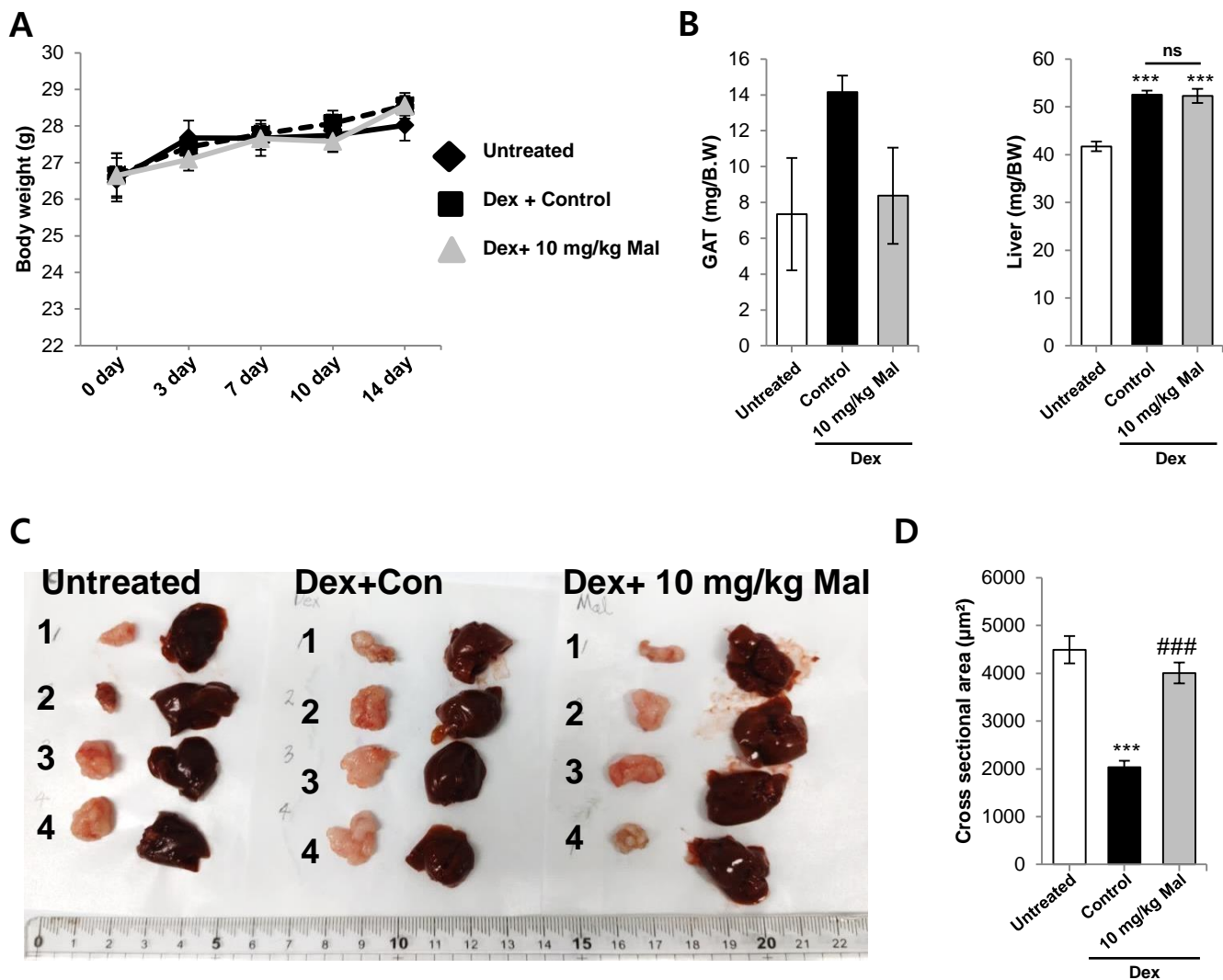
# Supplementary Figure 3



# Supplementary Figure 4

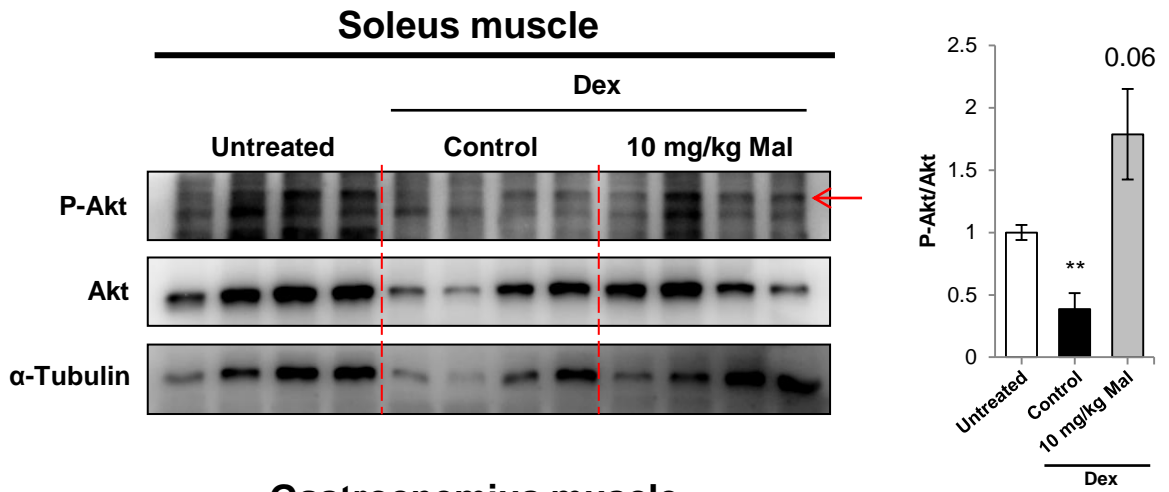


# Supplementary Figure 5

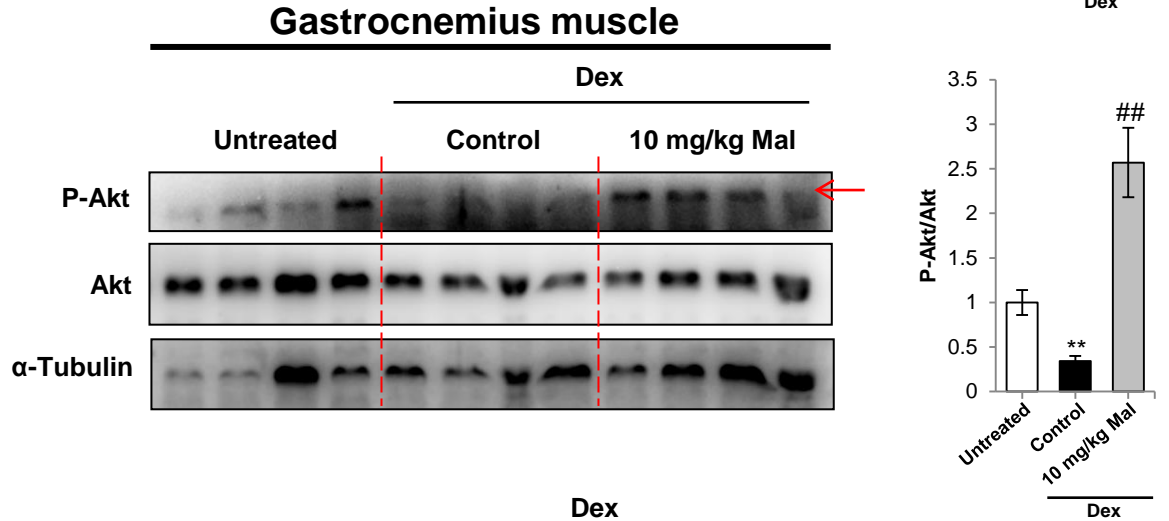


# Supplementary Figure 6

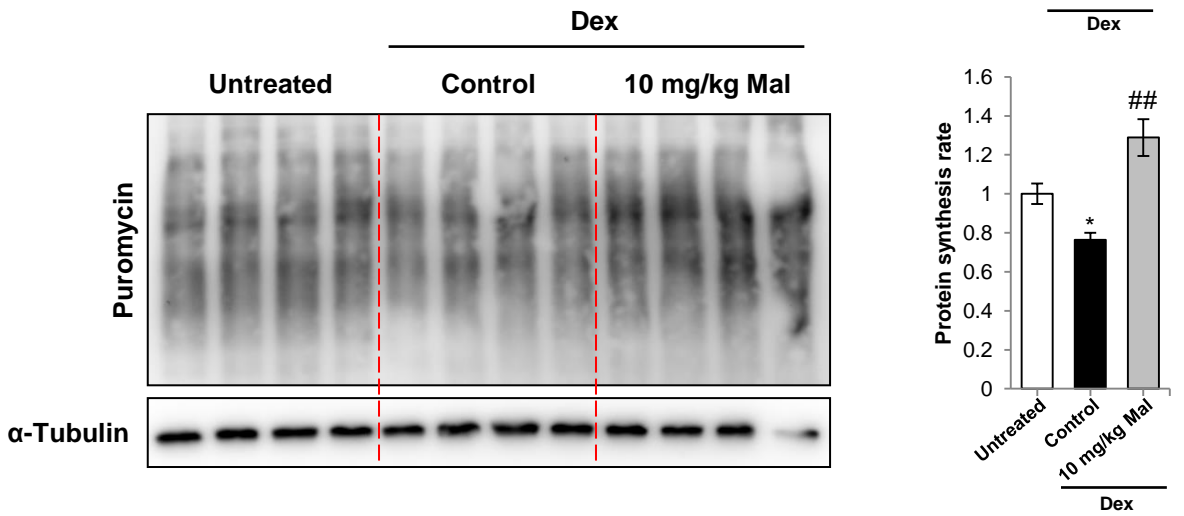
**A**



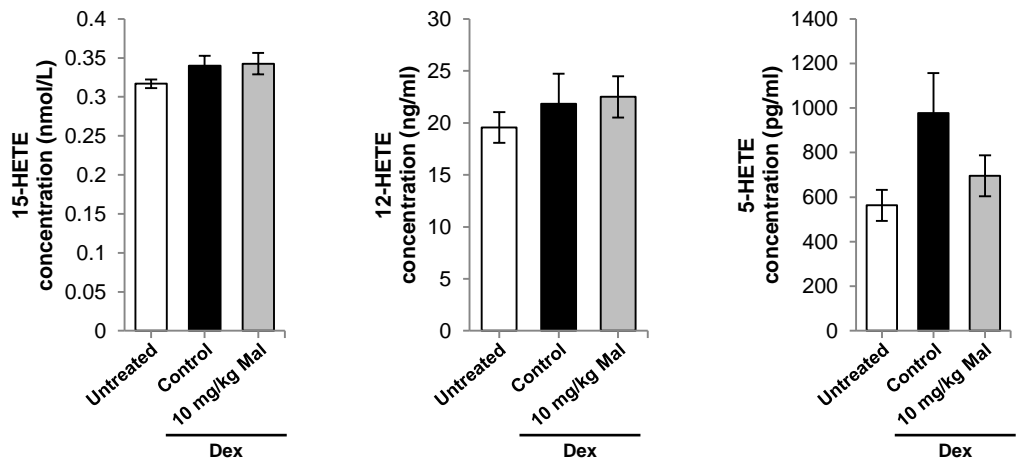
**B**



**C**

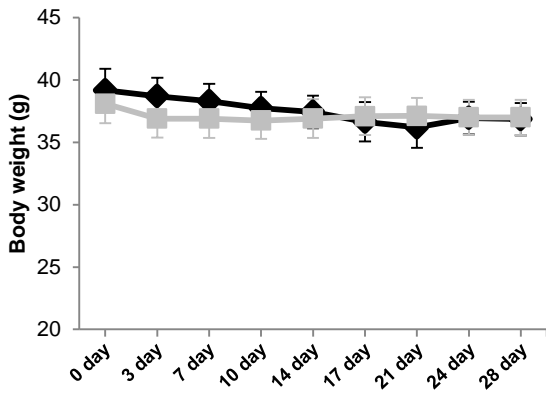


**D**

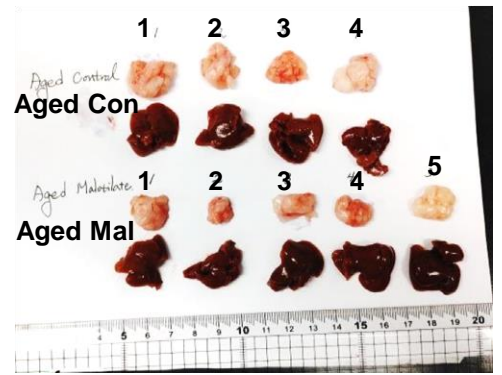
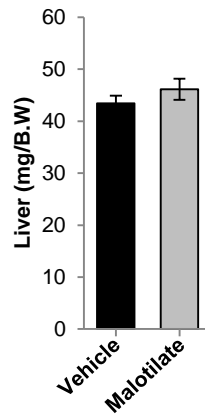


# Supplementary Figure 7

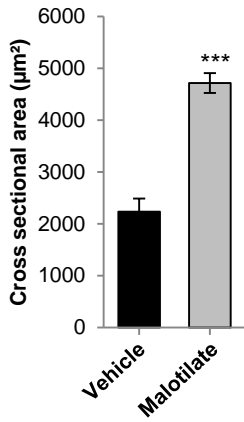
**A**



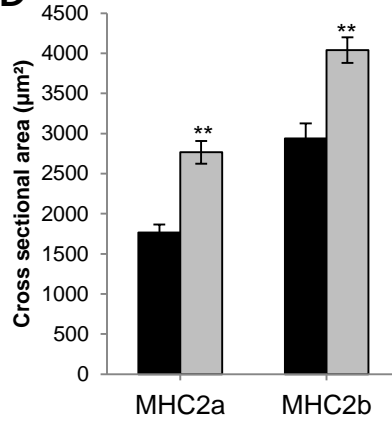
**B**



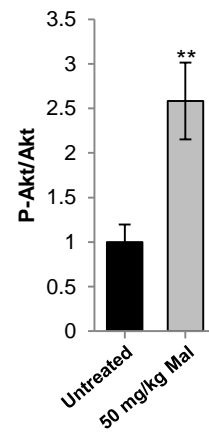
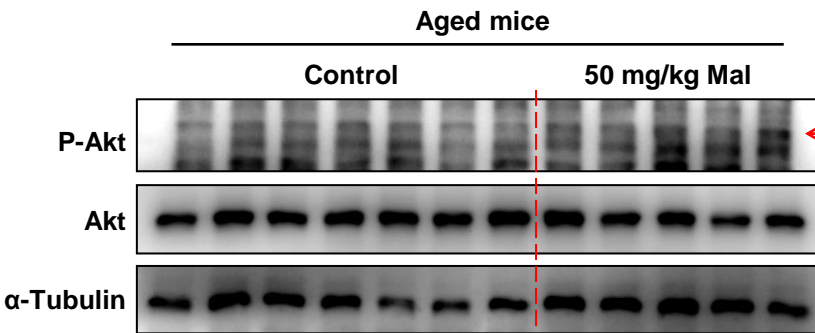
**C**



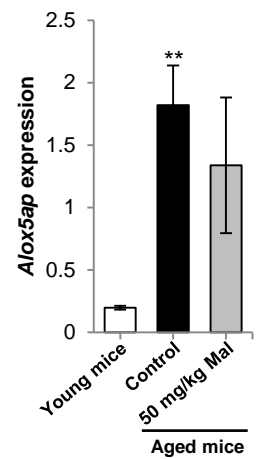
**D**



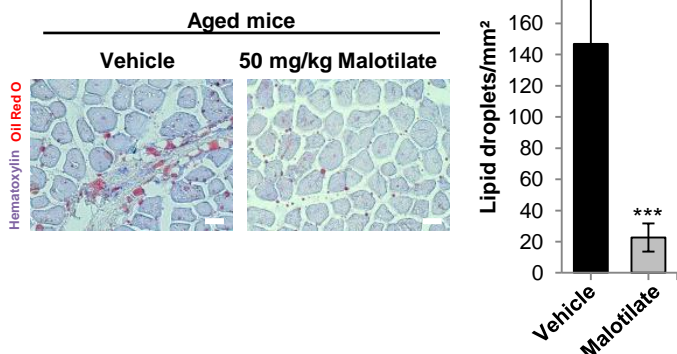
**E**



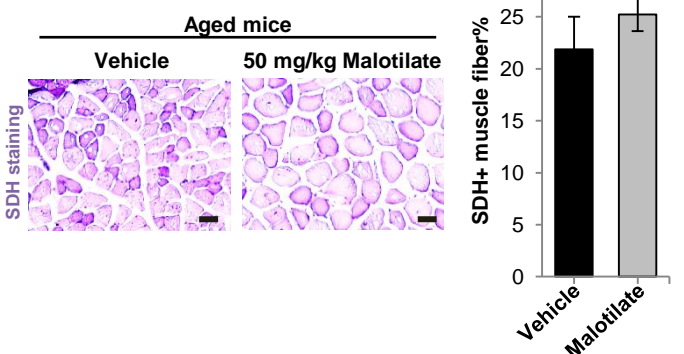
**F**



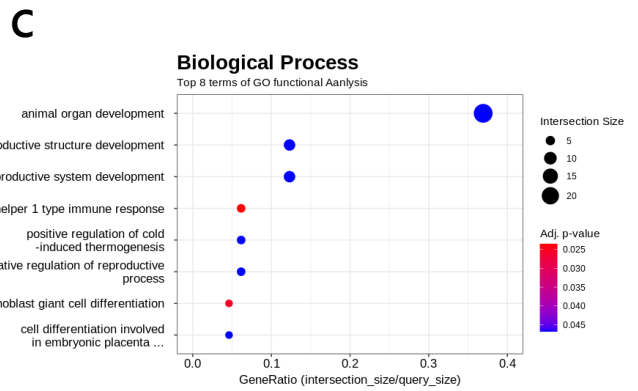
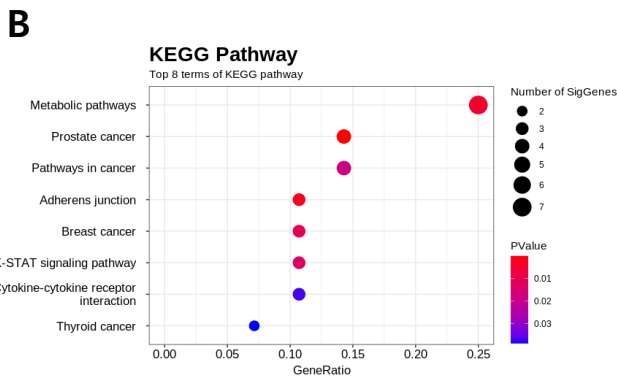
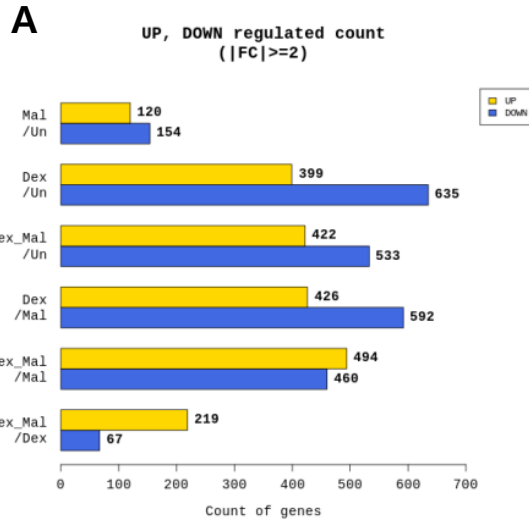
**G**



**H**



# Supplementary Figure 8

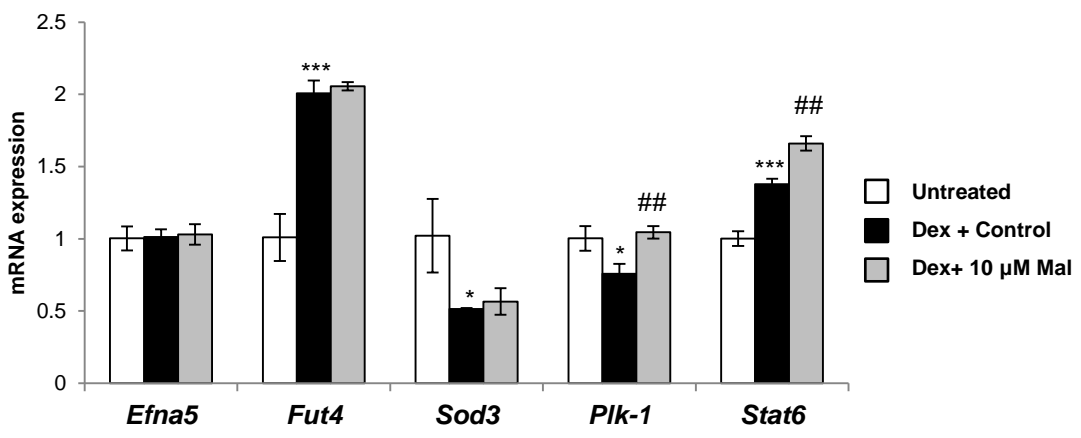


**D**

Gene_ID	Transcript_ID	Gene_Symbol	Description	Dex/Un	Dex+Mal/Dex
13640	NM_010109	Efna5	ephrin A5	-3.387657434	2.67166442
14345	NM_010242	Fut4	fucosyltransferase 4	-2.585502337	3.110126184
16000	NM_001111274	Igf1	insulin-like growth factor 1	-17.27002887	2.265058312
20657	NM_011435	Sod3	superoxide dismutase 3, extracellular	-2.632685712	2.010569838
18817	NM_011121	Plk1	polo like kinase 1	-3.305305622	2.010892279
20852	NM_009284	Stat6	signal transducer and activator of transcription 6	-	-2.528438
16878	NM_001039537	LIF	leukemia inhibitory factor	-3.659718	2.080632
217082	NM_172563	Hlf	hepatic leukemia factor	-6.18342103	3.030679
52679	NM_001358560	E2f7	E2F transcription factor 7	-6.890801	2.467073



# Supplementary Figure 9



**Table 1.** Primary antibodies used in this study

Primary antibody	Clone	Company	Catalog No.	Dilution
$\alpha$ -Tubulin	Polyclonal	Invitrogen	PA5-29444	1:5000
Puromycin (12D10)	Monoclonal	Millipore	MABE-343	1:25000
Atrogin-1/MAFbx (F-9)	Monoclonal	SANTA CRUZ	Sc-166806	1:100
FoxO3a (D19A7)	Monoclonal	CST	#12829	1:1000
Phospho-FoxO3a (Ser253)	Polyclonal	CST	#9466	1:1000
Myosin heavy chain 2 (A4.7)	Monoclonal	SANTA CRUZ	Sc-53095	1:1000
P62/SQSTM1	Polyclonal	Merck	P0067	1:1000
LC3B	Polyclonal	Merck	L7543	1:1000
5-Lipoxygenase	Monoclonal	Abcam	AB169755	1:1000
Phospho-Akt (Ser473)	Polyclonal	CST	#9271	1:1000
Akt	Polyclonal	CST	#9272	1:1000
Phospho-mToR (Ser2448)	Polyclonal	CST	#2971	1:1000
mToR	Polyclonal	CST	#2983	1:1000
Phospho-GSK-3 $\beta$ (Ser9)	Polyclonal	CST	#9336	1:1000
GSK-3 $\beta$	Polyclonal	CST	#9315	1:1000
Phospho-STAT3 (Tyr705)	Monoclonal	SANTA CRUZ	Sc-8059	1:1000
STAT3	Monoclonal	SANTA CRUZ	Sc-8019	1:1000
Phospho-SAPK/JNK (Thr183/Tyr185)	Monoclonal	CST	#4668	1:1000
JNK	Monoclonal	SANTA CRUZ	Sc-7345	1:1000
Phospho-I $\kappa$ B $\alpha$ (Ser32/36)	Monoclonal	CST	#9246	1:1000
I $\kappa$ B $\alpha$	Monoclonal	CST	#4812	1:1000
IGF-1	Polyclonal	Abcam	AB223567	1:1000
Laminin	Polyclonal	Abcam	AB11575	1:30
Myosin heavy chain Type IIA	Monoclonal	DSHB	SC-71	2-5 ug/ml
Myosin heavy chain Type IIB	Monoclonal	DSHB	BF-F3	2-5 ug/ml

**Table 2.** Secondary antibodies used in this study

Secondary antibody	Conjugated use	Company	Catalog No.	Dilution
Horse anti-Mouse IgG HRP	HRP	CST	#7074	1:2000
Goat anti-Rabbit IgG HRP	HRP	CST	#7074	1:2000
Alexa Fluor™ 488 Goat anti-mouse IgG(H+L)	Alexa Fluor 488	INVITROGEN	A11001	1:1000
Goat anti-Rabbit IgG h+L Dylight® 594 Conjugated	Dylight® 594	Bethyl	A90-116D4	1:1000

**Table 3.** Mouse primers used for qPCR

Primer name	Primer sequence	Size (bp)	Accession Number
Gapdh	F : CTCCACTCACGGCAAATTCA	120	NM_001289726
	R : GCCTCACCCCATTTGATGTT		
Atrogin-1	F : CAGAGAGCTGCTCCGTCTCA	178	NM_026346
	R : ACGTATCCCCCGCAGTTTC		
Murf-1	F : CCGAGTGCAGACGATCATCTC	198	NM_001039048
	R : TGGAGGATCAGAGCCTCGAT		
FoxO3a	F : TGGAGTCCATCATCCGTAGTGA	147	NM_019740
	R : CTGGTACCCAGCTTTGAGATGAG		
Pax7	F : CACAGAGGCAGAGCTGATTGC	157	NM_011039
	R : CCAATTGAGGAGAGTGACAGGTT		
Myf5	F : AGCTGGGCAGAATACGTGCTT	112	NM_008656
	R : AGAACAGGCAGAGGAGAATCCA		
Myod1	F : TGTCTTTTCGAAGCCGTTCT	169	NM_010866
	R : TGCAGCCAGAGTGCAAGTG		
Myogenin	F : AGCGCAGGCTCAAGAAAAGTG	181	NM_031189
	R : CCGCCTCTGTAGCGGAGAT		
Myh2	F : GATCACACGAACCCATATGATT	183	NM_001039545
	R : TTCATGTTCCCATAATGCATCAC		
Alox5	F : TTCCCATGTTACCGCTGGAT	100	NM_009662.2
	R : GCTGCTTGAGGATGTGAATTTG		
Efna5	F : GGAAGGCAGCTGTGAACGAA	100	NM_010109
	R : CCAGTTGCCTCCACTCCAAA		
Lif	F : TGCCGTCTGTGCAACAAGTAC	100	NM_001039537
	R : GGCAACCCAACTTTTTCCTTT		
Igf-1	F : TCAACAAGCCCACAGGCTATG	108	NM_010512
	R : AGTACATCTCCAGTCTCCTCAGATCA		
Hlf	F : ATCTGCAGCCGTCTACGTTTTTC	103	NM_172563
	R : CTCACCTGCCTCCAACACTCA		
E2f7	F : GACCCCAAAGACACCGATGA	100	NM_178609
	R : GTCGACCGGCTTTACTGGAGTA		
Stat6	F : AAGACCTGTCCATTCGCTCACT	100	NM_009284
	R : TGACTCCGAAAGCCTCATC		
Sod3	F : CCCCCAAAATATCCCTGAGAA	100	NM_011435
	R : TGTTAATGTCCTCAGTCCTCCAAA		
Plk1	F : GGCAACCTCTTCCTGAACGA	106	NM_011121
	R : GAGTGCCACACAAGGTCTTCTTT		

**Table 4.** Human primers used for qPCR

Primer name	Primer sequence	Size (bp)	Accession Number
Gapdh	F : CTGCACCACCAACTGCTTAGC	107	NM_002046
	R : TCTTCTGGGTGGCAGTGATG		
Atrogin-1	F : GGAACTACTCCAGACCCTCTACACA	103	NM_148177
	R : CTCCATCCGATACACCCACAT		
Murf-1	F : TTGACTTTGGGACAGATGAGGAA	102	NM_032588
	R : CCAGCTCCTTACTGGTGCCTT		
Igf-1	F : GGAAGTACATTTGAAGAACGCAAGT	101	NM_001111283
	R : TGCGGTGGCATGTCACTCT		
Efna5	F : CATGGTGAACCTTTGATGGCTACA	101	NM_001962
	R : ACTTCAGCGGTCCATTTGGA		
Fut4	F : GACTGTGCTATGGAACCAATCTTG	105	NM_002033
	R : TGTCTGGCAGAGTAGGCATGTAG		
Sod3	F : GCCTCCATTTGTACCGAAACA	110	NM_003102
	R : CGGGAGTCTCAGGGCTTATG		
Plk1	F : CACGGCTTTTTTCGAGGACAA	104	NM_005030
	R : GGCTCAGTCAGGGCTTTCC		
Stat6	F : CTCACCTTTTGGCAGTGGTTT	102	NM_001178078
	R : TGTTTGCTGATGAAGCCAATG		

## Online Supplementary references list.

- S1. *Medscape - Serum Cortisol*. 4 August 2022]; Available from:  
<https://emedicine.medscape.com/article/2088826-overview>.
- S2. Malkawi, A.K., et al., *Metabolomics Based Profiling of Dexamethasone Side Effects in Rats*. *Front Pharmacol*, 2018. **9**: p. 46.
- S3. Martin, P. and S.M. Parkhurst, *Parallels between tissue repair and embryo morphogenesis*. *Development*, 2004. **131**(13): p. 3021-34.
- S4. Yoshida, T. and P. Delafontaine, *Mechanisms of IGF-1-Mediated Regulation of Skeletal Muscle Hypertrophy and Atrophy*. *Cells*, 2020. **9**(9).
- S5. Stitt, T.N., et al., *The IGF-1/PI3K/Akt pathway prevents expression of muscle atrophy-induced ubiquitin ligases by inhibiting FOXO transcription factors*. *Mol Cell*, 2004. **14**(3): p. 395-403.
- S6. Cao, Y.Y., et al., *Sepsis induces muscle atrophy by inhibiting proliferation and promoting apoptosis via PLK1-AKT signalling*. *J Cell Mol Med*, 2021. **25**(20): p. 9724-9739.