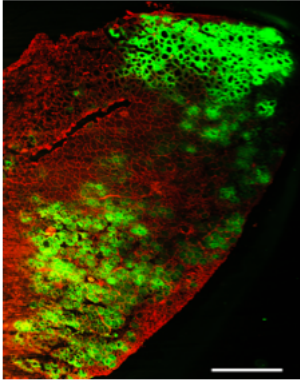


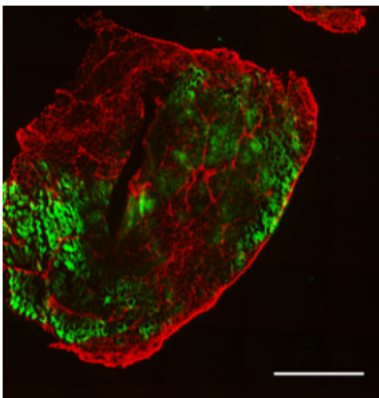
**Appendix** for “The AAA-ATPase ATAD1 and its partners promote degradation of desmin intermediate filaments in muscle”

<b>Page number</b>	<b>Appendix Figure/Table</b>	<b>Legend</b>
Page 2	Appendix Figure S1	Downregulation of ATAD1 in 14 d denervated muscles.
Page 2	Appendix Figure S2	Downregulation of ATAD1 in normal muscles.
Page 3	Appendix Figure S3	Calpain-1 is not required for ATAD1 recruitment to desmin filaments, but rather to ATAD1 release when desmin IF depolymerize.
Page 3	Appendix Figure S4	ATAD1 is expressed in various tissues.
Page 4	Appendix Table S1	Quantitative PCR primers and shRNA oligonucleotides used in the present study

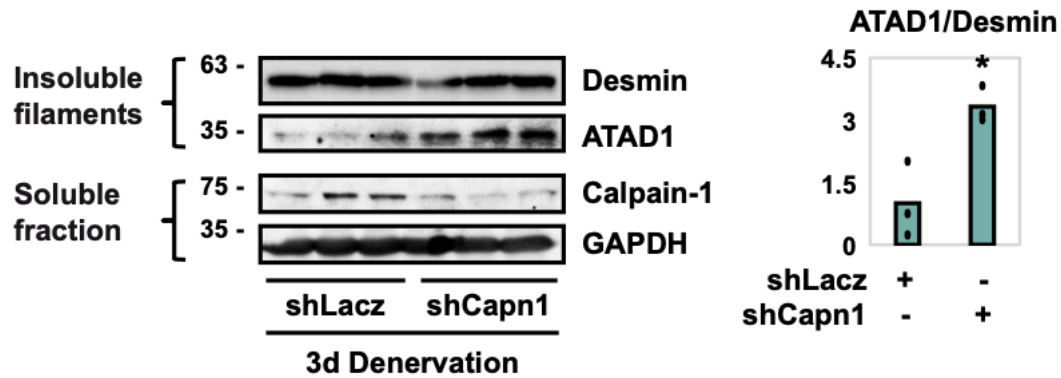
**Appendix figures:**



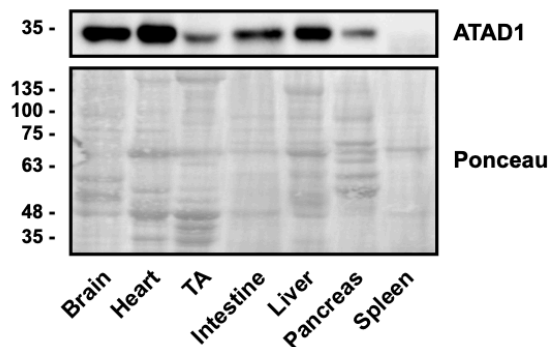
**Appendix Figure S1:** Cross sections from 14 d denervated muscles expressing shAtad1 were stained with WGA, and fiber size was measured using the Metamorph software. A representative image is shown. Bar, 500  $\mu\text{m}$ .



**Appendix Figure S2:** Cross sections from normal muscles expressing shAtad1 were stained with WGA, and fiber size was measured using the Metamorph software. A representative image is shown. Bar, 1000  $\mu\text{m}$ .



**Appendix Figure S3: Calpain-1 is not required for ATAD1 recruitment to desmin filaments, but rather to ATAD1 release when desmin IF depolymerize.** Left: desmin filaments isolated from denervated muscles expressing shLacZ or shCapn1 were analyzed by immunoblotting. Right: densitometric measurement of presented blots. Mean ratio of ATAD1 to desmin  $\pm$  SEM is presented. n = 3 mice, biological replicates. \*, P < 0.04 vs. shLacZ.



**Appendix Figure S4: ATAD1 is expressed in various tissues.** Soluble fractions from brain, heart, TA muscle, intestine, liver, pancreas and spleen were analyzed by SDS-PAGE and immunoblotting.

**Appendix Table S1. Quantitative PCR primers and shRNA oligonucleotides used in the present study**

DNA	Gene	Sequence (5' to 3')
PCR primer forward	<i>ATAD1</i>	TCTCCCATCGTCTCTGGTCCT
PCR primer reverse	<i>ATAD1</i>	TTCTACCTTCTGCTTCCTGGTG
PCR primer forward	<i>PLAA</i>	ACTGGATCAGCAGACAAGACC
PCR primer reverse	<i>PLAA</i>	CCAGTGATCTGCCACCTTCTA
PCR primer forward	<i>UBXN4</i>	GAGCCACATCCACAGAGCCTT
PCR primer reverse	<i>UBXN4</i>	CGCTACCCTACATCTGCTGCGTGGA
PCR primer forward	<i>RPLPO</i>	GCGACCTGGAAGTCCAATA
PCR primer reverse	<i>RPLPO</i>	ATCTGCTTGGAGCCCACAT
shRNA-1	<i>ATAD1</i>	CCTCCTCTGTGTCAGGGAATA
shRNA-2	<i>ATAD1</i>	AGGAAACTGAGTGCAGCCTGA
shRNA	<i>UBXN4</i>	GTGGTGGCGCATGCCTTTAAT
shRNA	<i>PLAA</i>	TGGCGAGTGTCTGGAAGTATA