

Figure S1

20S proteasome chymotryptic activity
using suc-LLVY-AMC

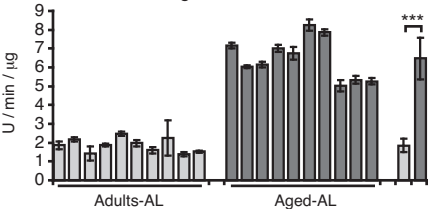


Figure S2

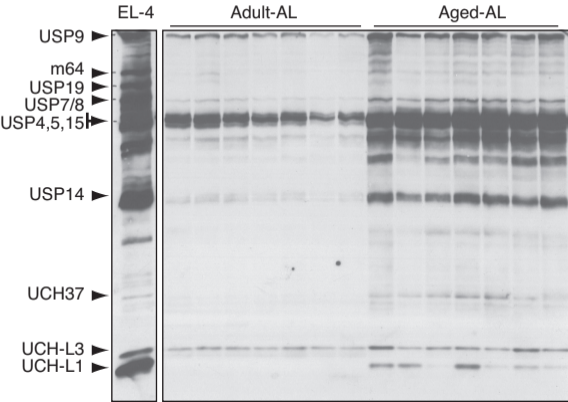
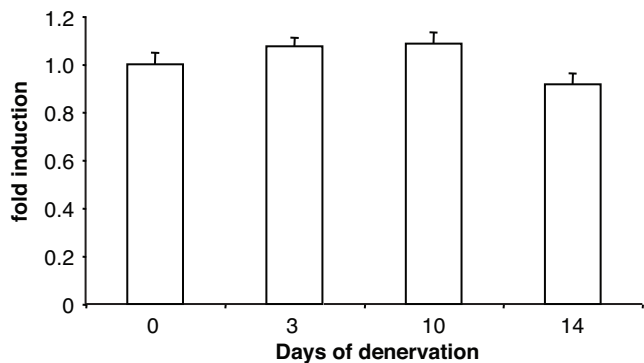
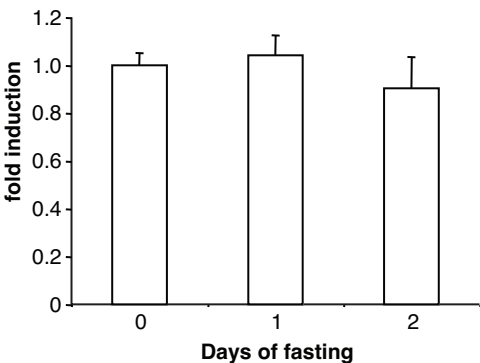


Figure S3

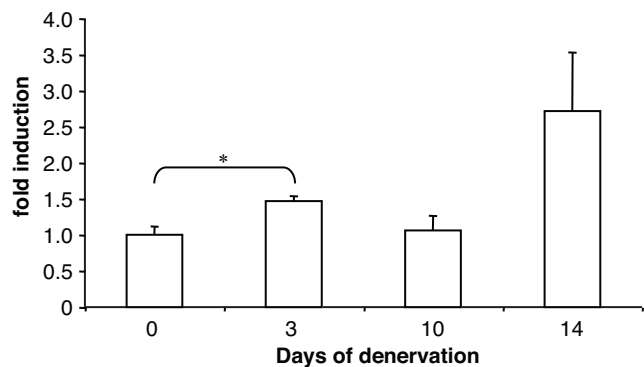
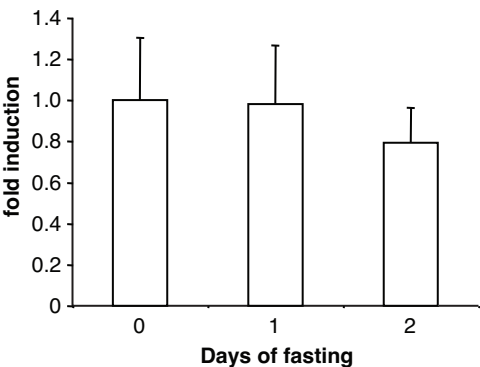
A

E6AP protein quantitation



B

CHIP protein quantitation



Supplementary Table

Table I: Antibodies used in this study.

Host	Antisera	Dilution	Source
Rabbit	Anti-β1	1:1000	Affinity BioReagents, Golden, CO, USA
Mouse	Anti-β3	1:5000	Affinity BioReagents, Golden, CO, USA
Rabbit	Anti-β1i	1:1000	Affinity BioReagents, Golden, CO, USA
Rabbit	Anti-β5	1:1000	Affinity BioReagents, Golden, CO, USA
Rabbit	Anti-β5i	1:1000	Affinity BioReagents, Golden, CO, USA
Mouse	anti-Rpt5	1:1000	BIOMOL Int., L.P., Plymouth Meeting, PA, USA
Mouse	Anti-Rpt6	1:1000	BIOMOL Int., L.P., Plymouth Meeting, PA, USA
Mouse	Anti-Rpt1	1:10000	BIOMOL Int., L.P., Plymouth Meeting, PA, USA
Rabbit	Anti-polyUb	1:10000	BIOMOL Int., L.P., Plymouth Meeting, PA, USA
Rabbit	Anti-Rpn11	1:10000	GenWay Biotech, Inc., San Diego, CA, USA
Rabbit	Anti-USP5	1:10000	Protein Tech Group Inc., Chicago, IL, USA
Mouse	Anti-UNC45B	1:1000	Abnova Coporation, Taipei, Taiwan
Mouse	Anti-Chip	1:1000	Santa Cruz Biotechnology, Inc., Santa Cruz, CA, USA
Goat	Anti-Npl4	1:1000	Santa Cruz Biotechnology, Inc., Santa Cruz, CA, USA
Goat	Anti-Ufd2	1:1000	Santa Cruz Biotechnology, Inc., Santa Cruz, CA, USA
Rabbit	Anti-p47	1:1000	Santa Cruz Biotechnology, Inc., Santa Cruz, CA, USA
Goat	Anti-USP14	1:10,000	Santa Cruz Biotechnology, Inc., Santa Cruz, CA, USA
Mouse	Anti-p97/VCP	1:10,000	BD Transduction Laboratories, USA
Rabbit	Anti-E6AP	1:1000	Santa Cruz Biotechnology, Inc., Santa Cruz, CA, USA
Rabbit	Anti-Ecm29	1:10,000	Abcam Inc., Cambridge, MA, USA
Rabbit	Anti-PA200	1:10000	Affinity BioReagents, Golden, CO, USA
Mouse	Anti-MuRF1	1:30	Generous gift of Regeneron Pharmaceuticals
Rabbit	Anti-Atrogin-1	1:1000	EMC Biosciences, Versailles, KY, USA
Mouse	Anti-HA	1:10000	12CA5, Roche Applied Science, Indianapolis, IN, USA
Rabbit	Anti-Dansyl	1:7500	Molecular probes, Invitrogen, UK
Mouse	Anti-Vinculin	1:5000	Abcam Inc., Cambridge, MA, USA
Rabbit	Anti-β-actin	1:1000	Cell signaling, Beverly, MA, USA
Rabbit	Anti-20S	3:1000	Generous gift of Dr John Monaco
Rabbit	Anti-Biotin-HRP	1:10000	Sigma-Aldrich, USA
Rabbit	Anti-goat-HRP	1:10000	Dako, Cambridgeshire, UK
Goat	Anti-rabbit-HRP	1:10000	Amersham Biosciences, Buckinghamshire, UK
Goat	Anti-mouse-HRP	1:10000	Amersham Biosciences, Buckinghamshire, UK

Supplementary Table

Table II: Real-time PCR primers used in this study.

Molecule	Subunit	Sense primer sequence (5'-3')	Antisense primer sequence (5'-3')
Proteasome	20S- α 2	cattcagcccatctggtaaactgt	ctgtacaccaaacgatgtgctt
Proteasome	20S- α 3	agctgagtaaagcggcgctgatctg	tcccaacaagtgcctgcggtgc
Proteasome	20S- β 1	acaagctgaccctatccac	cctgcgatgatgattcctg
Proteasome	20S- β 5	agacagtgaggggaacaggat	cgcacatggtagagggtgac
Proteasome	20S- β 2	cagagttgtcacagcgaatc	tccagacccaagtcatfa
Proteasome	20S- β 1i	tcgtggggctctgatt	tcgcggtagctgtaggagatg
Proteasome	20S- β 5i	ctctcgggacagatgtctc	cccaaccgtctttctca
Proteasome	11S-PA28 α	agccaacctgagcaatctga	tcgtctctgcccctttctt
Proteasome	19S-Rpt5	gacctggactcgcagaggaa	aacceaatcactggcaggaa
Proteasome	19S-Rpn9	gtttggcaccgttgaaga	gcatgggtcctgcacaaaat
E2-14kDa		gtgcaccatctgaaaacaa	atcggttctgcaggatgtct
Atrogin-1	(MAFbx)	ccatcaggagaagtggatctatgtt	gcttccccaaagtgcagta
MuRF1		tgtctggaggtcgtttccg	atgccggtccatgatcactt
PAC1		ggcgttcctttcatcgtt	agcagctacactggcagaga
PAC2		cccgacctaaagaacttcac	ggcaccaggcaatcagta
POMP	(hUmp1)	ggttcagcgtcttccgttc	gctcgcctcagttcactt
p97		gaaggcatcactggcaatct	tcctcatcctctcgttga
P47		gatcatcgggacgaggactt	ccatctgccagtcggattt
Chip		aagagtgtcagcggaaacca	caatgtccttgcggtcatag
E6AP		gacaatagaattcgcattg	tccttagccggacaagt
Npl4		gccgagagcatcataatcc	gtaaaccgagaagccgttgt
Ufd2		cactctgccaacgatga	cgaatgtagcgacgacaa
Unc45B		cgtacctcactttgacgctgat	gccagcagcttctcacacga
β -actin		tcgtaccactggcattgtgat	cgaagtctaggccaacatagca