

Figure S1

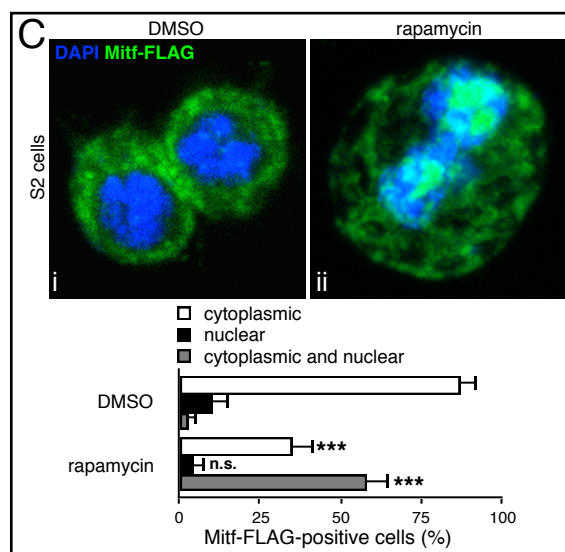
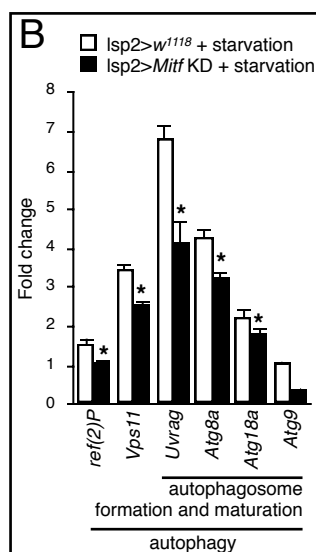
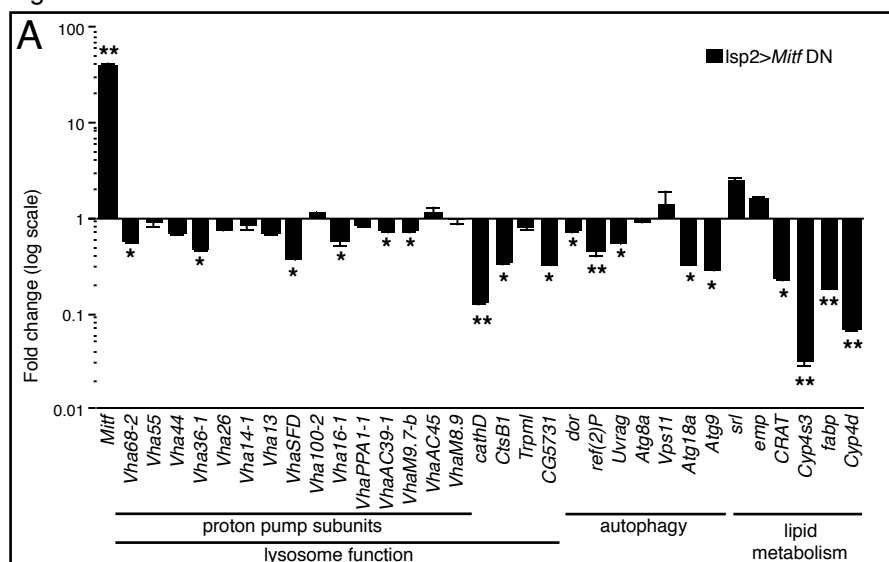


Table S1. *Drosophila* genotypes.

Fig. 1E	$y^1 w^{1118}; +; lsp2-GAL4/+$
	$y^1 w^{1118}; +; lsp2-GAL4/UAS-Mitf-9B1$
	$y^1 w^{1118}; UAS-P\{KK113614\}VIE-260B/+; lsp2-GAL4/+$
Fig. 2A	$w^{1118}; UAS-CD8:GFP/+; +; ok107-GAL4/+$
	$w^-; UAS-CD8:GFP/UAS-P\{KK113614\}VIE-260B; +; ok107-GAL4/+$
Fig. 2B	$y^1 w^{1118}; +; lsp2-GAL4/+$
	$y^1 w^{1118}; UAS-P\{KK113614\}VIE-260B/+; lsp2-GAL4/+$
Fig. 2C	$w^{1118}, elav-GAL4; +; +$
	$w^-, elav-GAL4UAS; P\{KK113614\}VIE-260B/+; +$
Fig. 2D	$w^{1118}, elav-GAL4; +; +$
	$w^-, elav-GAL4UAS; P\{KK113614\}VIE-260B/+; +$
Fig. 3A	$y^1 w^{1118}; +; lsp2-GAL4/+$
	$y^1 w^{1118}; +; lsp2-GAL4/UAS-Mitf-9B1$
	$y^1 w^{1118}; UAS-P\{KK113614\}VIE-260B/+; lsp2-GAL4/+$
Fig. 3B	$w^{1118}; +; Lsp2-GAL4, LAMP1:GFP/+$
	$w^-; +; Lsp2-GAL4, LAMP1:GFP/UAS-Mitf-9B1$
	$w^-; UAS-P\{KK113614\}VIE-260B/+; lsp2-GAL4, LAMP1:GFP/+$
Fig. 3C	$w^{1118}, elav-GAL4; +; +$
	$w^-, elav-GAL4UAS; P\{KK113614\}VIE-260B/+; +$
	$w^-, elav-GAL4UAS; +; UAS-Mitf-9B1/+$
Fig. 4A	$y^1 w^{1118}, elav-GAL4; UAS-mCherry-Atg8a/+; +$
	$y^1 w^{1118}, elav-GAL4; UAS-mCherry-Atg8a/P\{KK113614\}VIE-260B; +$
	$y^1 w^{1118}, elav-GAL4; UAS-mCherry-Atg8a/+; UAS-Mitf-9B1/+$
Fig. 4B	$y^1 w^{1118}; +; lsp2-GAL4/+$
	$y^1 w^{1118}; +; lsp2-GAL4/UAS-Mitf-9B1$
	$y^1 w^{1118}; UAS-P\{KK113614\}VIE-260B/+; lsp2-GAL4/+$
Fig. 5A	$w^{1118}; +; Lsp2-GAL4, LAMP1:GFP/+$
Fig. 5B	$w^-; +; Lsp2-GAL4, LAMP1:GFP/UAS-Mitf-9B1$
Fig. 5C	$w^-; UAS-P\{KK113614\}VIE-260B/+; lsp2-GAL4, LAMP1:GFP/+$
Fig. 6C	$y^1 w^{1118}; +; lsp2-GAL4/+$
	$y^1 w^{1118}; UAS-P\{KK113614\}VIE-260B/+; lsp2-GAL4/+$
Fig. S1A	$w^{1118}; +; lsp2-GAL4/+$
	$w^-; UAS-Mitf-EA2/+; lsp2-GAL4/+$
Fig. S1B	$y^1 w^{1118}; +; lsp2-GAL4/+$
	$y^1 w^{1118}; UAS-P\{KK113614\}VIE-260B/+; lsp2-GAL4/+$

Table S2. Probes used for *Drosophila* lysosomal genes in the coexpression analysis.

Human gene		<i>Drosophila</i> gene		Affimetrix probe ID
name	HGNC ID	name	CG	
ATP6AP1	868	VhaAC45	CG8029	153649_at
ATP6AP2	18305	VhaM8.9	CG8444	154539_at
ATP6V0A1	865	Vha100-1	CG1709	153997_at
ATP6V0A2	18481	Vha100-2	CG18617	142661_at
TCIRG1	11647	Vha100-4	CG7678	142662_at
ATP6V0A4	866	Vha100-5	CG12602	146249_at
ATP6V0B	861	VhaPPA1-1	CG7007	142158_at
		VhaPPA1-2	CG7026	149926_at
ATP6V0C	855	Vha16-1	CG3161	141528_at
		Vha16-2	CG32089	148578_at
		Vha16-3	CG32090	
ATP6V0D1	13724	VhaAC39-1	CG2934	154279_at
ATP6V0D2	18266	VhaAC39-2	CG4624	150428_at
ATP6V0E1	863	VhaM9.7-b	CG7625	150038_at 148161_at
ATP6V0E2	21723	VhaM9.7-d	CG14909	
		VhaM9.7-a	CG1268	
		VhaM9.7-c	CG11589	
ATP6V1A	851	Vha68-2	CG3762	146305_at
ATP6V1B1	853	Vha55	CG17369	153041_at
ATP6V1B2	854			
ATP6V1C1	856	Vha44	CG8048	153422_at
ATP6V1C2	18264			
ATP6V1D	13527	Vha36-1	CG8186	152480_at
		Vha36-3	CG8310	144407_at
ATP6V1E1	857	Vha26	CG1088	151930_at
ATP6V1E2	18125			
ATP6V1F	16832	Vha14-1	CG8210	143625_at
ATP6V1G1	864	Vha13	CG6213	144156_at
ATP6V1G2	862			
ATP6V1G3	18265			
ATP6V1H	18303	VhaSFD	CG17332	144191_at
AGA	318	-	CG1827	152972_at
		-	CG10474	147485_at
ARSB	714	-	CG7402	148982_at
		-	CG8646	147111_at
		-	CG32191	
		-	CG7408	148979_at
SLC35F6	26055	Tango9	CG10007	141417_at
CCZ1	21691	Ccz1	CG14980	148129_at
CLCN7	2025	ClC-b	CG8594	147105_at
CLN3	2074	cln3	CG5582	148976_at
CREG1	2351	CREG	CG5413	144063_at
CTNS	2518	-	CG17119	150417_at
CTSB	2527	CtsB1	CG10992	152070_at
CTSD	2529	cathD	CG1548	141682_at
CTSF	2531	-	CG12163	151801_at
DNASE2	2960	DNaseII	CG7780	152336_at
GBA	4177	-	CG31148	151533_at
		-	CG31414	142341_at
GLA	4296	-	CG5731	146129_at
GLB1	4298	Ect3	CG3132	153367_at

		Gal	CG9092	143033_at
GNS	4422	-	CG18278	141556_at
GUSB	4696	- βGlu	CG15117 CG2135	153526_at 153705_at
HEXA HEXB	4878 4879	Hexo1 Hexo2 fdl	CG1318 CG1787 CG8824	153410_at 144712_at 153421_at
HGSNAT	26527	-	CG6903	154096_at
IDS	5389	-	CG12014	148109_at
IDUA	5391	-	CG6201	153830_at
LAMP1 LAMP2	6499 6501	Lamp1	CG3305	146589_at
LAPTM4A LAPTM4B LAPTM5	6924 13646 29612	-	CG14767	146833_at
MANBA	6831	β-Man	CG12582	149266_at
MFSD8	28486	-	CG8596	152873_at
NAGA	7631	-	CG7997	153785_at
NAGLU	7632	-	CG13397	141346_at
NCSTN	17091	nct	CG7012	154779_at
OSTM1	21652	-	CG14969	152988_at
PLBD2	27283	lama	CG10645	153774_at
PPT1	9325	Ppt1	CG12108	144710_at
PSAP	9498	Sap-r	CG12070	142226_at
RNASET2	21686	RNaseX25	CG8194	152173_at
SCPEP1 CTSA CPVL	29507 9251 14399	- - - - -	CG3344 CG32483 CG31823 CG31821 CG4572	152830_at 144317_at 141260_at
SGSH	10818	-	CG14291	150169_at
SLC17A5	10933	MFS9 MFS10 Picot dmGlut -	CG4288 CG4330 CG8098 CG5304 CG6978	152929_at
TMEM192	26775	-	CG7523	155125_at
TMEM55B	19299	-	CG6707	148501_at
TMEM9	18823	-	CG1161	149322_at
IGF2R	5467	Lerp	CG31072	150685_at

Table S3. Sequences of the primers used for qRT-PCR experiments.

Dm gene	CG	Forward (5'-3')	Reverse (5'-3')
Act5C	CG4027	CGTCGACCATGAAGATCAAG	TTGGAGATCCACATCTGCTG
Mitf	CG43369	GCGTTCTTCTTCAGGGATTG	ACTTACGCTCGGCGAAATAG
Vha68-2	CG3762	TCATCATCTACGTCGGTTGC	TACGCTTCATGATGGACTCG
Vha55	CG17369	ATTTGGCCACCATCTACGAG	ATGGTCAGAATGGGGATCTG
Vha44	CG8048	TGTTCAACGTGACGCTCTTC	TCTTGTCCGTCATCAGCTTG
Vha36-1	CG8186	GATTCTGGGCAAGATCATCG	AGCACCACTTGGTTGATGTC
Vha26	CG1088	GCAGATCAAGCACATGATGG	ATGATCTTGAGACGCTGCTG
Vha14-1	CG8210	GCCATCCCAACTTTATGGTG	GGAAACGCTTGAAACAGTCC
Vha13	CG6213	AGGTTGAAGCAAGCCAAGG	GGATATCCGCATCGATCTTG
VhaSFD	CG17332	GATTTGCCTTTGTGGGAGTC	TTGCACCTGGAAGTTGACAC
Vha100-2	CG18617	ACCCACTTCAAGCGTTATGC	TGAACACCATGTAGCCGAAG
Vha16-1	CG3161	AAGTCTGGTACCGGTATTGC	CCATGACCACAGGAATGATG
VhaPPA1-1	CG7007	CGGCTATTCAAGACACGAAC	ATGCCGCAGAACAGATTGAC
VhaAC39-1	CG2934	AGTACGCCGCTTTGTTTGAC	AAAAAGGCGTACACGTCCAG
VhaM9.7-b	CG7625	TGACTCAATGCTGCCTGATG	TTAGTTTGGGTCCGATGAGG
VhaAC45	CG8029	TCCTGATGGGACTGTTTGTG	TGATGTCCATCATCCAGCAG
VhaM8.9	CG8444	GTCCCAAGGCAATCAGTTTC	AAGGGATCGTTGATGGTCAG
cathD	CG1548	ACTTCCGTGTGGTTTTTCGAC	TGGAGGCATCGTACTTGTTG
CtsB1	CG10992	AGCACCATGTGAATGGAACC	GCTTGTCTTGGCATAATCG
Trpml	CG8743	TACCTGCTCGCTTTTTCTGG	CGATAAGGAAGCGCAGAATC
-	CG5731	ACAAGGGCATTGAGATCTGG	CAAAGGCAATTGCGTAGGAG
dor	CG3093	TGAACACCTTCAGCTTGTGC	CCATGAACCTTCAAGCACACC
ref(2)P	CG10360	ATTGGGTTCCGCTACAAGTG	TCAAGTGCTCAGGATGCTTG
Uvrug	CG6116	ACTGGCAATCGAAGGCTATG	AAACTCATCCTCGCCATCTG
Atg8a	CG32672	ATTCCACCAACATCGGCTAC	GCCATGCCGTAAACATTCTC
Vps11	CG32350	TGCTACTGCTTTCCCGAATC	CGTGGATGGAGATTTGAAGG
Atg18a	CG7986	AATAGTTTCCAGCGAGCAC	CACGGCCAGTATTGTGTTTG
Atg9	CG3615	AGCTAATGACCGCCATTCTG	CGAAGGGACTGAAGATTTTCG
srl	CG9809	AACAACCCCGACTTTGACAC	CTCTATTTTCGCCTGCTTGG
emp	CG2727	TCCCATCATGCTAAGCTTCC	CCCATTTTAGGCTGAACGTC
CRAT	CG1041	TGAAGGCTGCCTATTTGACC	TCGTTGAATTCTCCAGTCC
Cyp4s3	CG9081	TGGACACCTTCATGTTTCGAG	TACGGCATCGATTCTTCTC
fabp	CG6783	TTCAAGACCTCTGCCATCAG	GATGATGCTCTTGACGTTGC
Cyp4d1	CG3656	AACGTGCTTCACCAGTTCAC	TCATCATTGCTGCTCTCCTG