TPC1 has two variant isoforms and their removal has different effects on endo-lysosomal functions compared to loss of TPC2

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Table S1. Primers and PCR parameters used for determination of the gene trap insertion site in the *Tpcn1*^{XG716} allele.

Primers	PCR parameters
F1: GCAGAGCGAGGTATGTAGGC R1: TTGCCGCCTCTTGATAATTC	92 ºC (2 min)
F1: GCAGAGCGAGGTATGTAGGC R2: GGCAGATCTTTGAAGGCAAG	92 ºC (10 s) 56 ºC (15 s) 68 ºC (6 min)] 10 x
F1: GCAGAGCGAGGTATGTAGGC R3: ATGATGAGGCTCTTGGGATG	92 ºC (10 s) 56 ºC (15 s) 68 ºC (6 min + 20s/cycle)] 20 x
F2: TGACGGTGAAAACCTCTGACAC R4: GGCAGATCTTTGAAGGCAAG	72 ºC (6 min)

F (forward), R (reverse).

Table S2. Primers and PCR parameters used for genotyping mice.

Mouse line	Primers	Amplicon sizes (bp)	PCR parameters
Tpcn1^{XG716}	I2 F: AACTTGTTAGGATCTCCCCGC I2 R: GGCAGATCTTTGAAGGCAAG βgeo F: TGACGGTGAAAACCTCTGACAC	WT allele: 496 XG716 allele: 383	94 ºC (5 min) 94 ºC (15 s) 56 ºC (30 s) 72 ºC (1 min)] 30 x 72 ºC (6 min)
Tpcn1^{T159}	I4 F: CTGGCATCTTGAGGTTTGGT I5 R: GGGCTACACTCCCAAGCATA βgal F: CCAGCTCATTCCTCCCACTC	WT allele: 376 T159 allele: 459	

Primers for genotyping *Tpcn1*^{XG716} were designed based on results from Figure 1C.
Primers for genotyping *Tpcn1*^{T159} were designed based on information available at EMMA.
I (intron), E (exon), βgeo (βgal/neo cassette).

Table S3. Primers and PCR annealing temperatures used for studying expression of transcripts.

Transcript	Primers	Amplicon sizes (bp)	Anneling temperature
Tpcn1A	E2 F: AGTTTAGATGACGATGTGCCG E9 R: TTGACGATGCTGTTCTCCAG	819	58
Tpcn1B	I2 F: CCACCACGGCTTCTGAGTT E6 R: CACAATGGCCTCGATGAAC	497	57
Tpcn1B	I2 F: CCACCACGGCTTCTGAGTT E27 R: AGAAGAGGCTGGCTTGACG	2408	58
Tpcn1A/B	E4 F: ACCTCTTCGTCCACAACCAC E9 R: TTGACGATGCTGTTCTCCAG	516	58
Tpcn1A/B	E6 F: ATTTTCCTGGTGGACTGTCG E13 R: CAGAGCAGCGACTTCGTAAA	606	57
Tpcn1A:βgeo	E2 F: AGTTTAGATGACGATGTGCCG βgeo R: GACAGTATCGGCCTCAGGAAGATCG	438 (in XG716)	58
		1335 (in T159)	58
Actb	E2 F: GATGACGATATCGCTGCGCTGGTCG E4 R: GCCTGTGGTACGACCAGAGGCATACAG	447	58

I (intron), E (exon), βgeo (βgal/neo cassette).

Table S4. Primers and probes used for qPCR

Transcript	Primers	Universal Probe
Tpcn1A/B	F: TCCAAGGCCTTCCAGTATTTC R: CTCCACCAGGATCCAGACAC	77
Gapdh	F: AGCTTGTCATCAACGGGAAG R: TTTGATGTTAGTGGGGTCTCG	9
Cyc1	F: ACCTGGTGGGAGTGTGCTAC R: CATCATCATTAGGGCCATCC	10
Actb	F: CTAAGGCCAACCGTGAAAAG R: ACCAGAGGCATACAGGGACA	64
Rn18s	F: CTCAACACGGGAAACCTCAC R: CGCTCCACCAACTAAGAACG	77
Rhob	F: TATGTGGCGGACATCGAG R: AGAGCGGCCGTAAACGAT	79
Rab7b	F: TCGAGGAATACCAGACCACA R: GCTTCAAAGTTGTGTCATCCAA	55

Primer pairs and their matching Universal ProbeLibrary probes were designed by Roche Universal ProbeLibrary Assay Design Centre.