Appendix

Table A1: **MALDI-TOF MS and LC-MS/MS analyses of lysosome-enriched fraction**

Coomassie Blue-stained Spots (#) [a]		Man6*P* eluate [b]	Non bound [c]
Known lysosomal proteins			
Legumain	(#59→68)	Legumain	Legumain
Dipeptidyl peptidase 1	(#56→58)	Dipeptidyl peptidase 1	Dipeptidyl peptidase 1
Protein CREG1	(#46→51)	Protein CREG1	Protein CREG1
Cathepsin D	(#26→38)	Cathepsin D	Cathepsin D
Cathepsin Z	(#38→44)	Cathepsin Z	
α-*N*-acetylgalactosaminidase	(#16→25)	α-*N*-acetylgalactosaminidase	α-*N*-acetylgalactosaminidase
Cathepsin A	(#45)	β-hexosaminidase subunit α	β-hexosaminidase subunit α
Dipeptidyl peptidase 2	(#9→15)	Dipeptidyl peptidase 2	Dipeptidyl peptidase 2
Epididymal secretory protein E1 (Npc2)	(#51→54)	Lysosomal α-glucosidase	Lysosomal α-glucosidase
Sphingomyelin phosphodiesterase, acid like 3a	(#1→3)	Lysosomal α-mannosidase	Lysosomal α-mannosidase
Palmitoyl-protein Thioesterase 1	(#69→71)	Palmitoyl-protein Thioesterase 1	Palmitoyl-protein Thioesterase 1
		Group XV phospholipase A_2	Group XV phospholipase A_2
		Epididymis-specific α-mannosidase	
		Phospholipase D4	Phospholipase D4
Non known lysosomal proteins		β-glucuronidase	
Serpin1AC	(#72)	Retinoid-inducible serine carboxypeptidase	
Fibrinogen γ	(#4→8)	Putative phospholipase B-like 2	
		β-galactosidase	
		Pro-cathepsin H	
		Sphingomyelin phosphodiesterase	
		Plasma glutamate carboxypeptidase	
		β-hexosaminidase subunit β	
		Lysosomal acid lipase/cholesteryl ester hydrolase	

		Cathepsin B
Mammalian ependymin-related protein 1		
N(4)-(β-*N*-acetylglucosaminyl)-L-asparaginase		N(4)-(β-*N*-acetylglucosaminyl)-L-asparaginase
Phospholipase B-like 1		
Serine protease inhibitor A3C		
Ferritin light chain 1		
		Apolipoprotein E
Hemoglobin subunit epsilon-Y2		Hemoglobin subunit epsilon-Y2
Ribonuclease UK114		
Ribonuclease T2		
Prefoldin subunit 1		
Elongation factor 2		
AT-rich interactive domain-containing protein 1A		
		ATP synthase subunit □, mitochondrial
		ATP synthase subunit □, mitochondrial
		Copine-3
		Peroxisomal bifunctional enzyme
		Lysosomal protein NCU-G1
		Lysosome-associated membrane glycoprotein 2
		Probable lysosomal cobalamin transporter
		Prolow-density lipoprotein receptor-related protein
		Long-chain-fatty-acid-CoA ligase 1
		Ig γ-2B chain C r
		V-type proton ATPase subunit E

	Transmembrane protein 106
	α-soluble NSF attachment protein
	Hydroxyacyl-coenzyme A dehydrogenase, mitochondrial
	V-type proton ATPase subunit β, brain isoform
	β-actin-like protein 2
	Succinate dehydrogenase [ubiquinone] flavoprotein subunit, mitochondrial
	Receptor-type tyrosine-protein phosphatase C
	Protein disulfide-isomerase A3
	ATP-binding cassette sub-family B member 6, mitochondrial
	Phospholipid transfer protein
	Amine oxidase [flavin-containing] B
	Serum albumin
	Fibronectin
	Serotransferrin

[a]2D separation of 200µg of lysosome-enriched fraction prepared from *Acp2/Acp5* -/- mice and stained by Coomassie Blue (n=3). The numbering (#) corresponds to identified spots encircled in Supplementary Figure 2
[b]Man6*P* eluate fraction after Man6*P*-affinity chromatography of lysosome-enriched fraction (150µg) prepared from *Acp2/Acp5* -/- mice
[c]Non bound fraction after Man6*P*-affinity chromatography of lysosome-enriched fraction prepared from *Acp2/Acp5* -/- mice