## Supplementary figures



**Figure S1.** Quantification of GCase (left) and GBA2 (right) band intensities shown in figure 2C; GCase and GBA2 specific ABP was employed to fluorescently label the enzymes and subsequently visualized by fluorescence scanning after SDS-PAGE total active GCase and GBA2.



**Figure S2.** Quantification of LIMP2 band intensities on immunostained western blot as shown in figure 4A.



**Figure S3.** Immunofluorescence of Npc<sup>+/+</sup> and Npc<sup>-/-</sup> liver (**A**) Immunofluorescence microscopy of GPNMB and galectin-3. Scale bar = 20  $\mu$ m; dashes outline clusters of Kupffer cells in livers of Npc1-/- mice; scale bar=20 $\mu$ m. (**B**) Immunofluorescence microscopy of LIMP2 and LAMP1. Scale bar = 20  $\mu$ m; dotted line indicates the borders of the Npc1-/- deficient Kupffer cell; (**C**) Verification of LIMP2 pattern by alternative antibody; composite' panels of immunostaining of Npc1<sup>+/+</sup> and Npc1-/- liver of 80-days-old mice: IBA1 is depicted in yellow and LIMP2 in magenta. Brightfield scans were analyzed using spectral imaging; separate images are displayed in heat-map intensity scale. Scale bar = 50  $\mu$ m.



**Figure S4.** Immunohistochemical analysis showing 'composite panels' of MiT/TFE family members and IBA1 in Npc1<sup>+/+</sup> and Npc1<sup>-/-</sup>-liver of 80-days-old mice; MITF, TFEB and TFE3 are depicted in yellow and IBA1 in magenta. Brightfield scans were analyzed using spectral imaging; separate images are displayed in heat-map intensity scale. Scale bar =  $50 \mu m$ .