



**Supplementary Figure 1.** Accumulation of different ceramide and sphingomyelin species in acid ceramidase deficient mice and effect of acid sphingomyelinase co-ablation. **(a-b)** The effects of *Asm* co-deficiency on ceramides **(a)** and sphingomyelins **(b)** of different chain lengths were analyzed by liquid chromatography tandem-mass spectrometry (LC-MS/MS) of snap-frozen spleen samples of *Ac* deficient mice. \*  $p < 0.05$  compared to *Asah1<sup>tmEx1</sup>*, #  $p < 0.05$  compared to *Asah1<sup>tmEx1</sup> / Smpd1<sup>-/-</sup>* (ANOVA with Dunnett posttests). The legend at the bottom of the figure applies to both **(a)** and **(b)**.