

List of Supplementary Figures

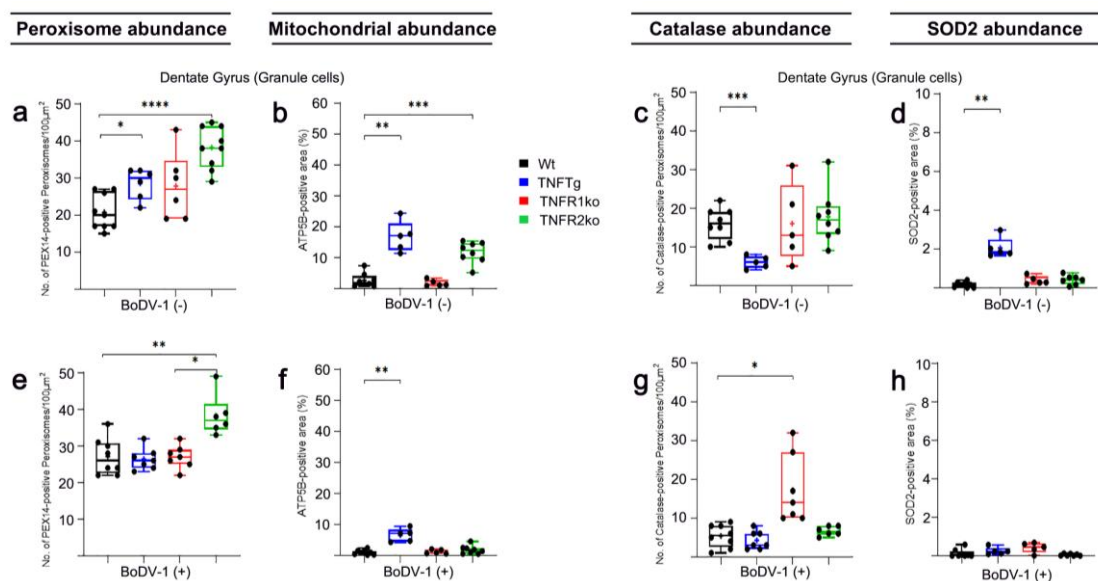


Figure 1. Differential changes (one-way ANOVA) of PEX14 (a, e)- and catalase (c, g)-positive peroxisomes, ATP5B (b, f)- and SOD2 (d, h)-positive mitochondria in granule neurons of the dentate gyrus of different mouse lines, with and without BoDV-1 infection [Wt (black), TNFTg (blue), TNFR1ko (red) and TNFR2ko (green) mice]. **Wt**, wild-type; **TNFTg**, TNF transgenic; **TNFR1ko**, TNF receptor 1 knockout; **TNFR2ko**, TNF receptor 2 knockout; **BoDV-1(-)**, without BoDV-1 infection; **BoDV-1(+)**, with BoDV-1 infection.

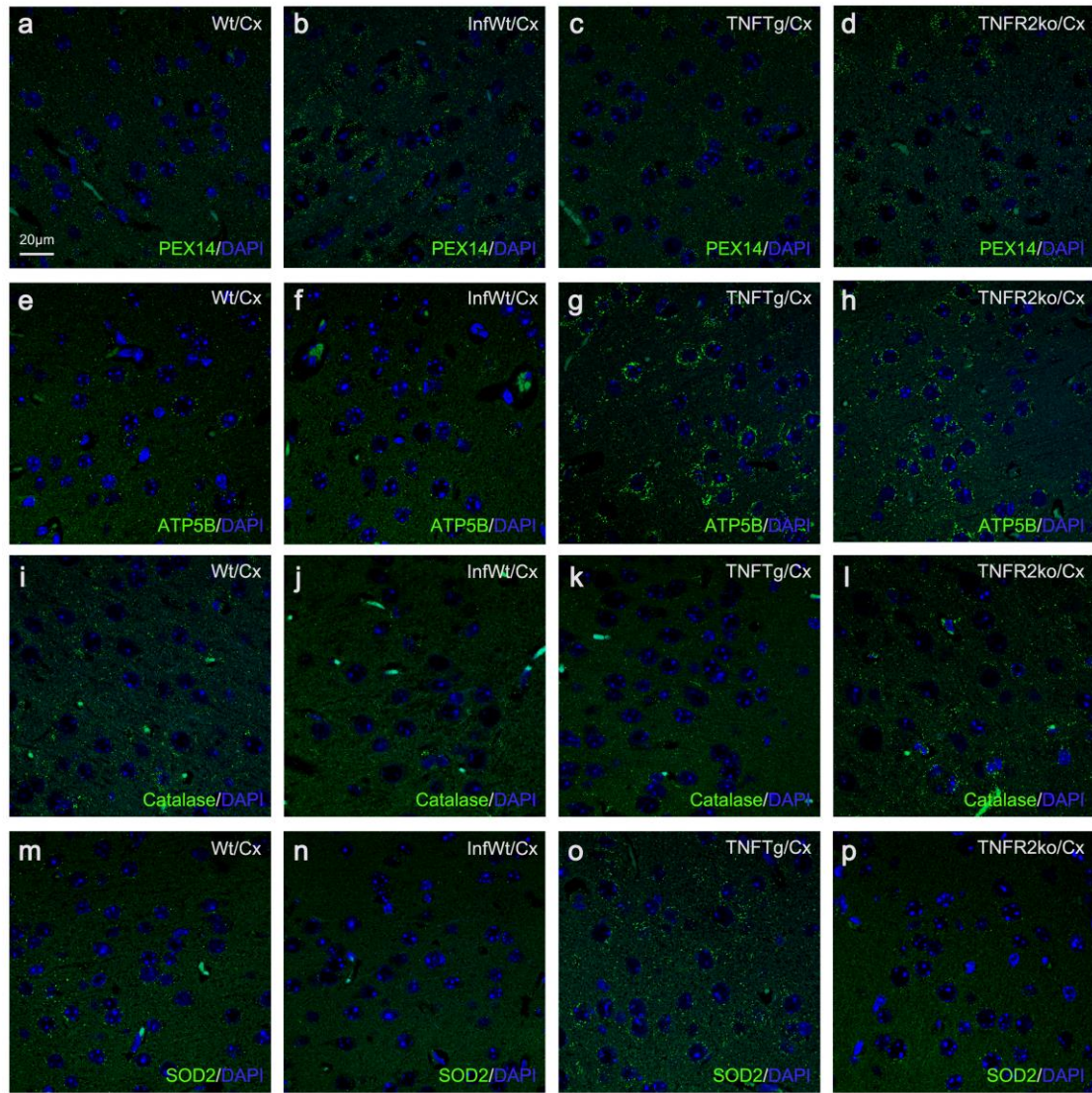


Figure 2. Immunofluorescence photomicrographs of PEX14 (**a-d**)- and catalase (**i-l**)-positive peroxisomes as well as ATP5B (**e-h**)- and SOD2 (**m-p**)-positive mitochondria in pyramidal neurons of the cerebral cortex of non-infected and BoDV-1-infected mice. Brain sections (2 μ m) were stained using primary antibodies against PEX14 (peroxisomal marker), ATP5B (mitochondrial marker), catalase, and SOD2 and secondary antibodies coupled with Alexa Fluor® 488 (green) together with the nuclear dye DAPI (blue). *Wt*, wild-type; *TNFTg*, TNF transgenic; *TNFR2ko*, TNF receptor 2 knockout; *InfWt*, BoDV-1-infected Wt; *Cx*, cerebral cortex.

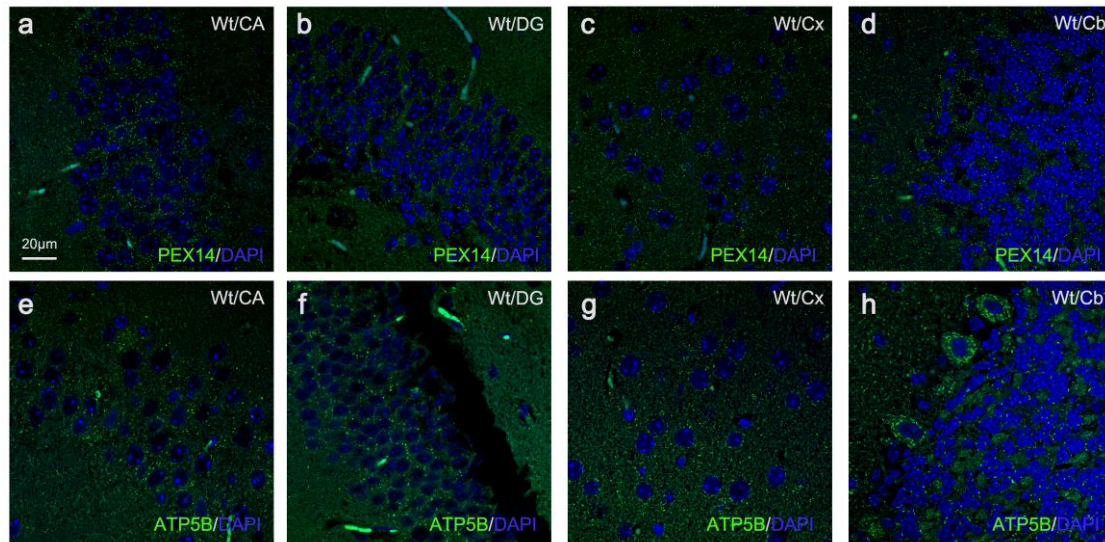


Figure 3. Immunofluorescence photomicrographs of PEX14-positive peroxisomes (**a-d**) and ATP5B-positive mitochondria (**e-h**) in several distinct neuronal cell types of the hippocampus (DG and CA band), cerebral and cerebellar cortices of non-infected Wt mice. Using fluorescing antibodies, 2 μ -thick brain sections were indirectly immunostained against PEX14 (peroxisomal marker) and ATP5B (mitochondrial marker). DAPI (blue) was used as the nuclear stain for all neuronal cell types. **Wt**, wild-type; **CA**, cornu ammonis band; **DG**, dentate gyrus; **Cx**, cerebral cortex; **Cb**, cerebellar cortex.

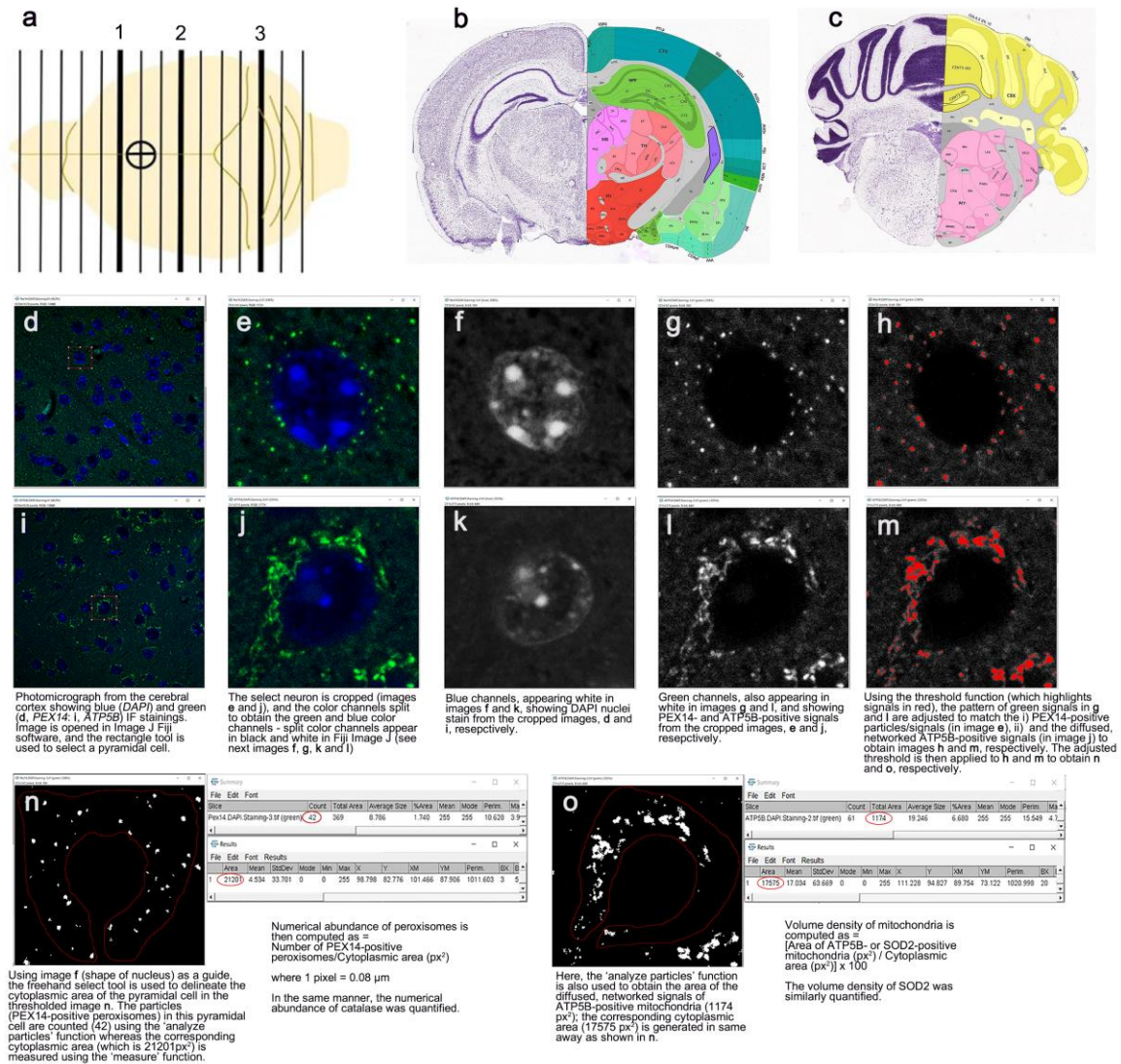


Figure 4. Schematic diagram showing dorsal view of mouse brain divided transversely (shown by thicker black lines) at levels: 1 (B; Bregma 1.32 mm; Interaural 5.12mm), 2 (C; Bregma -2.12mm; Interaural 1.68 mm) and 3 (D; Bregma -5.88; Interaural -2.08) to obtain the three brain areas (a; modified from atlas by T. Capra). Bregma (the cross inside a circle) is the point where the coronary suture and the sagittal suture intersect. Distance between bars is 1 mm. In the hippocampal formation (HPF), granule neurons were analyzed from the dentate gyrus (DG) and pyramidal neurons from the cornu ammonis (CA) bands 3 and 2; pyramidal neurons from laminae III and V were analyzed from the cerebral mortor cortex (b; Allen brain atlas). Granule and Purkinje neurons from the cerebellar cortex (CBX) were also analyzed (c; Allen brain atlas). Quantitative analyses of the abundances of PEX14-positive peroxisomes (d-h, n) and ATP5B-positive mitochondria (i-m, o).

