

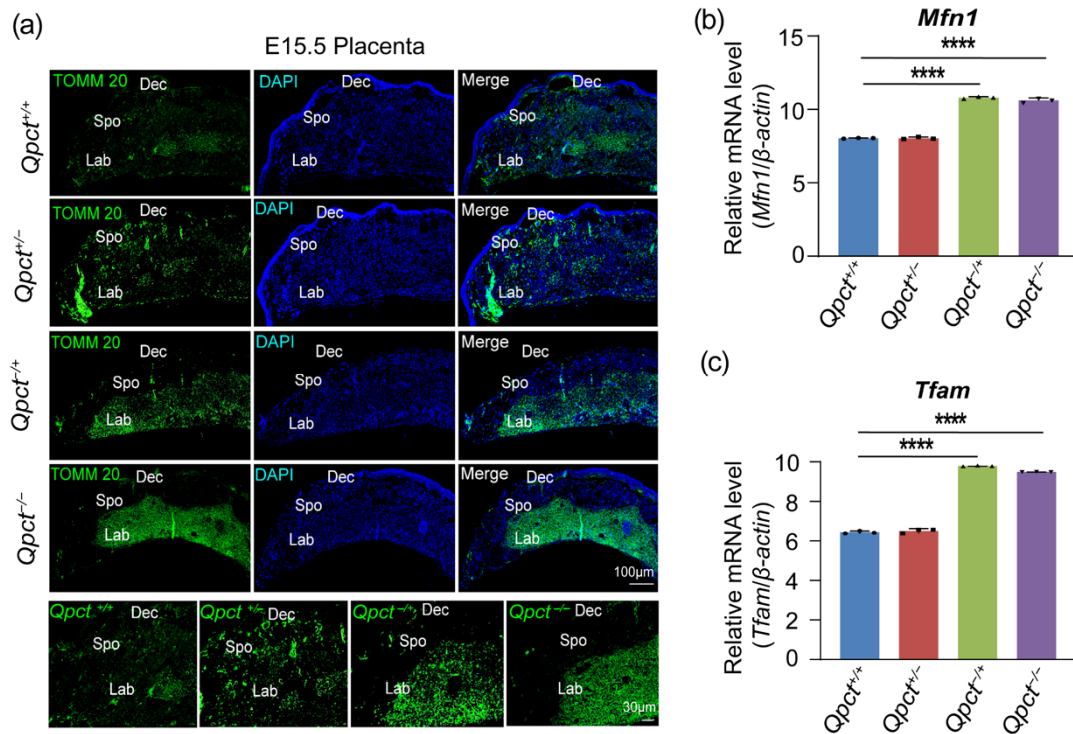


Fig. S1 Physiological effect of glutaminyl-peptide cyclotransferase (*Qpct*) on the mitochondrial function in placentae of the four genotypes at E15.5. (a) Immunohistochemical evaluation of mitochondrial localization in placental tissues from four genotypes at E15.5. Placental paraffin sections (5 µm thick) were subjected to fluorescent staining using an anti-TOMM20 antibody and 4',6-diamidino-2-phenylindole (DAPI) ($n=6$ per genotype, scale bar=30 µm), showing magnified views of the decidual and labyrinth layers in the placenta. Dec: decidual layer; Lab: labyrinth layer; Spo: spongioblast layer. (b, c) The messenger RNA (mRNA) expression levels of mitochondrial fusion gene 1 (*Mfn1*) and mitochondrial transcription factor A (*Tfam*) in placental tissues from the four genotypes at E15.5. Data are shown as mean±standard deviation (SD). **** $P<0.0001$, $n=3$.