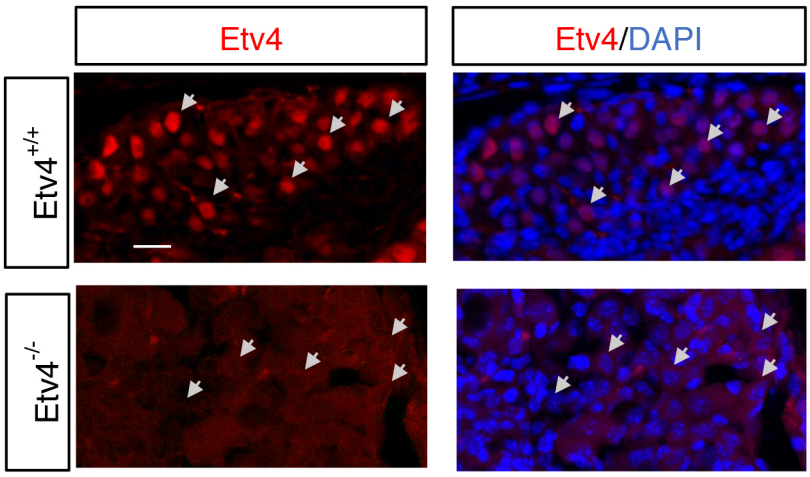

Fig. S1. Control of anti-Etv4 antibody specificity

Images of DRG sections obtained from newborn Etv4$^{+/+}$ and Etv4$^{-/-}$ mice stained with anti Etv4 (red) antibodies and the nuclear staining DAPI (blue). Scale bar: 25 µm. Arrowheads indicate neuronal nucleus

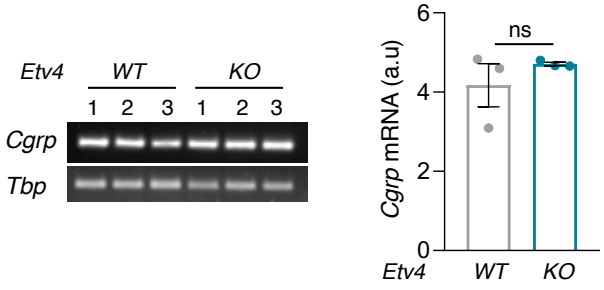

Fig. S2. Expression of CGRP in DRGs from wild-type and *Etv4* knockout mice.

Semiquantitative RT-PCR analysis of *Cgrp* expression in lumbar DRGs obtained from wild-type (WT) and Etv4 knockout (KO) mice at P20. The bar graph shows the levels of mRNA normalized using the expression of the housekeeping gene Tbp. a.u., arbitraty units. Data are mean±s.e.m., n=3 mice/genotype. Ns, not significant (two-tailed Student´s *t*-test)

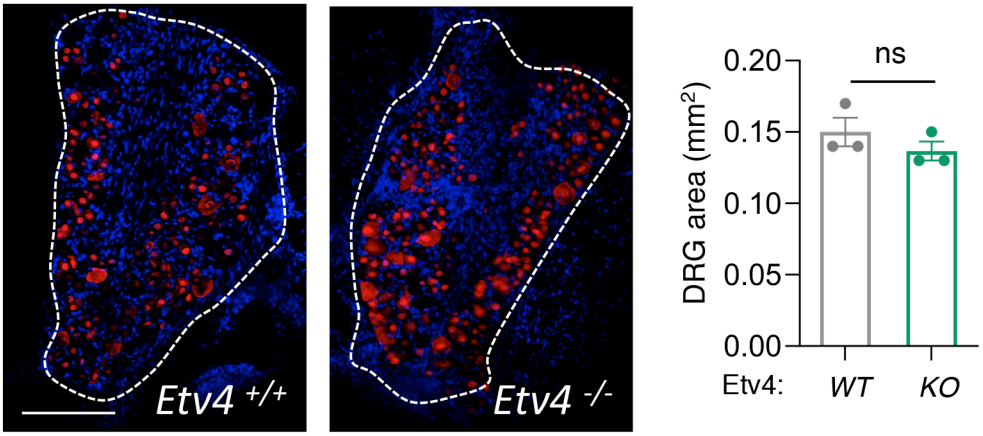

Fig. S3. Etv4 is not required for DRG sensory neurons survival

Representative images show the comparable size of L4-L5-L6 DRG from *Etv4*$^{+/+}$ and Etv4 -/- mice at P15. Neurons were stained with the neuronal marker NeuN (red) and nuclei were stained with DAPI (blue). Scale bar 500 µm. The graph describes the area (mm2) of L4-L5-L6 DRG sections derived from *Etv4*$^{+/+}$ and *Etv4*$^{-/-}$ mice. Data is expressed as mean ± SEM of 3 mice/genotype (n=3, 13 sections/animal). ns denotes not significant by two-tailed Student's t test. p=0.3295.

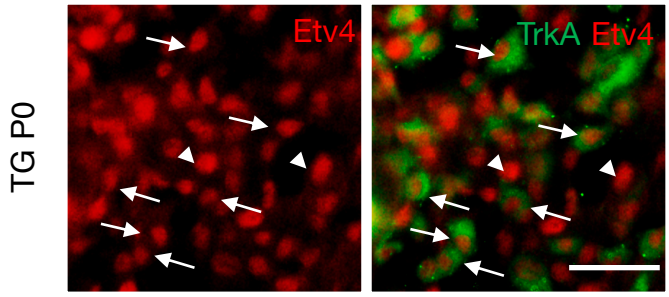

Fig. S4. Etv4 is expressed in TrkA-positive trigeminal sensory neurons

Representative images of trigeminal ganglia (TG) coronal sections showing the expression of Etv4 (red) and TrkA (green) at P0. Arrows indicate individual neurons coexpressing Etv4 and TrkA, arrowheads indicate neurons expressing Etv4 in the absence of TrkA. Scale bar 50 µm.

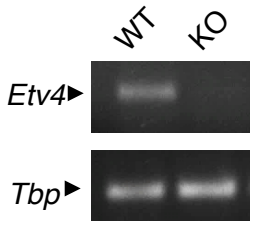

Fig. S5. Control of *Etv4* mRNA expression in DRG from control or Etv4-deficient mice used to analyze MMPs and Upar expression. TATA binding protein (Tbp) was used as housekeeping gen

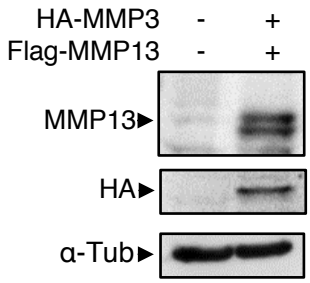

Fig. S6. Control of MMP3 and MMP13 expression in HEK-293 cells

HEK-293 cells were transfected with control or MMP3-HA and MMP13-Flag expressing plasmids. Cell extracts were analyzed by immunoblot to show expression of the different MMPs by using antibodies against HA or MMP13. The same blot was probed for α-Tubulin.