



Fig. S14. Hv1-mediated pH_i ROS production in different conditions. **a, b** Typical images showing the FITC fluorescence excitations at 488 nm and 402 nm in naïve (**a**) and CFA (**b**) DRG neurons. **c** The FITC fluorescence intensity of DRG neurons excited at 402 nm (black line) or 488 nm (red line) was monitored in real time. **d** Time-dependent curves for the mechanical allodynia caused by i.pl. injection of PMA (50 pmol/paw) in mice (n = 8 mice, two way repeated-measures ANOVA followed by Sidak's multiple comparisons test). **e**

Representative images and quantifications of DHE imaging showing the effects of vehicle, YHV98-4 (20 μ M) and Zn^{2+} (100 μ M) on ROS production induced by PMA (500 ng/ml) in isolated mouse bone marrow neutrophils (n = 44-77 cells from 3 mice, One-way ANOVA followed by Tukey test). **f** Images for DHE staining in DRG section from naïve, or WT or *Hvcn1*^{-/-} mice after CFA injection. **g** Images for DCFH-DA staining showing the ROS production in DRG section from AAV-control and AAV-Hv1 KD mice. **h-j** Images for DCFH-DA staining showing the ROS production in acutely dissociated DRG neurons in different conditions. **k** Images and quantifications for DHE staining in DRG section from naïve, or vehicle or YHV98-4 (10 mg/kg, i.p.) treated SNI mice. (n = 16-18 sections from 4 mice, one-way ANOVA followed by Tukey's multiple comparison test). Data in (**d**, **e** and **k**) are shown as mean \pm SEM. **P* < 0.05, ***P* < 0.01, *****P* < 0.0001.