

Supplementary figures

Estrogen receptor beta controls proliferation of enteric glial cells and differentiation of neurons in the myenteric plexus after damage.

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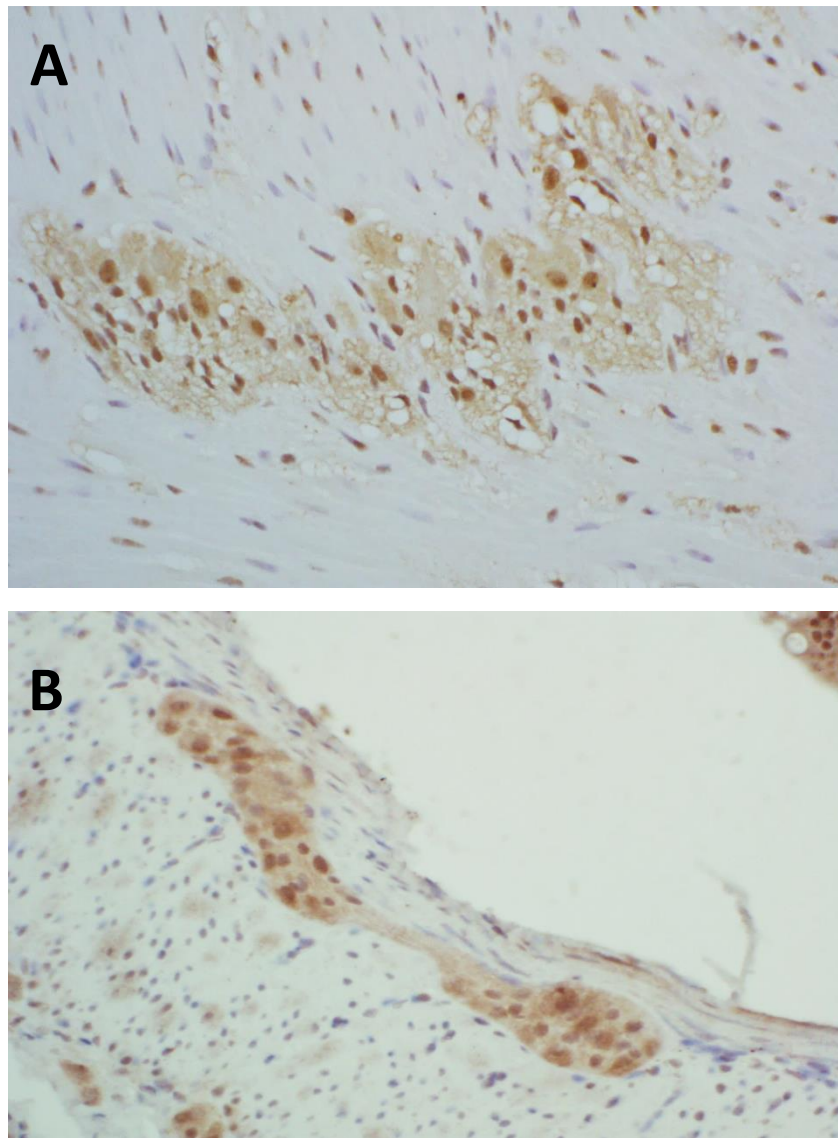


Fig. S1 Estrogen receptor beta (Er β) expression in mouse and human myenteric plexus.

Immunohistochemical images of muscularis externa of human (A) and mouse (B) showing high expression of Er β (brown nuclear staining) in the myenteric plexus.

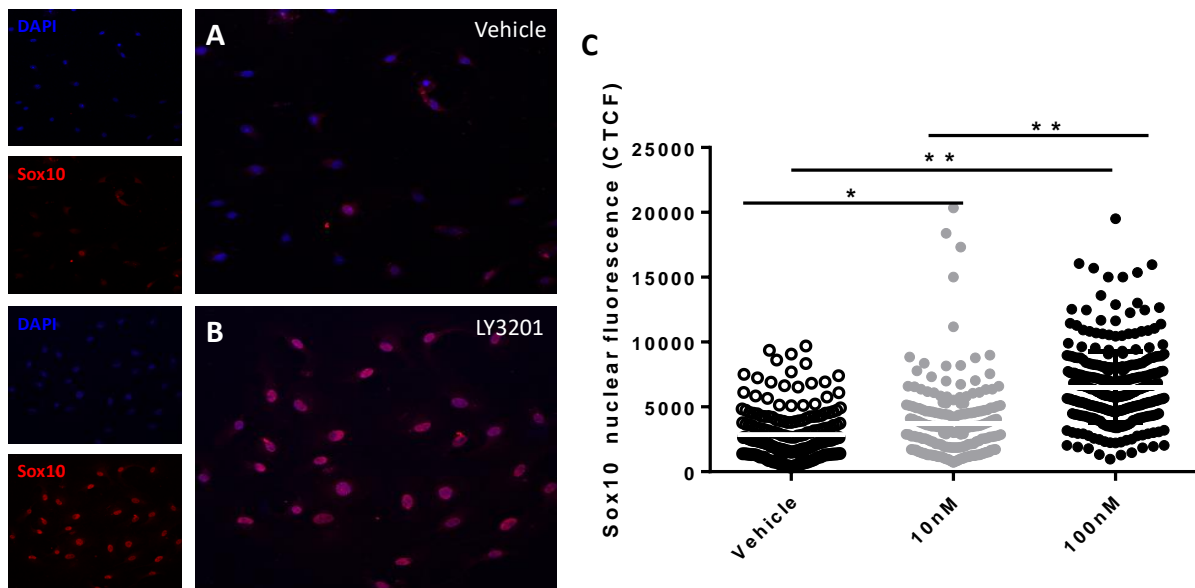


Fig.S2 LY3201 increases the intensity of fluorescence of Sox10. To investigate whether Sox10 belongs to the pool of Er β -regulated genes murine myenteric ganglia were cultured for 7 days with different concentration of LY3201 as indicated. Immunofluorescence images of individual ganglia cultured with vehicle (A) and with LY3201 100nM (B) were stained with anti-Sox10 (red). (C) Sox10 nuclear fluorescence intensity (CTCF) significantly increased upon treatment with LY3201 in a dose-dependent manner. One-way ANOVA followed by Dunnett's Multiple Comparison Test (*p<0,05; **p<0,001).

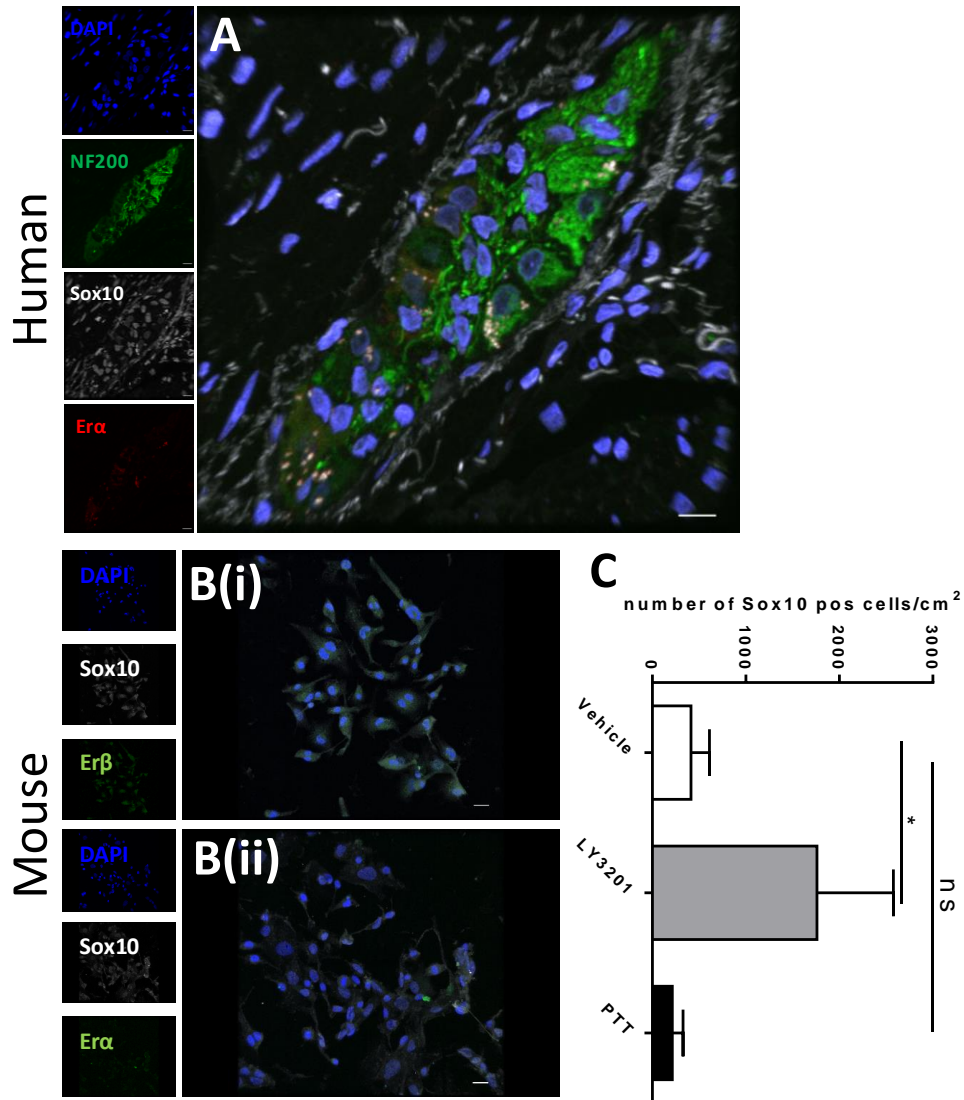


Fig.S3 Estrogen receptor alpha (Er α) expression is low to not detectable in human myenteric plexus and in murine cultured myenteric ganglia. (A) Confocal microscopy images of myenteric plexus from the colon of human stained for Er α (red), neurofilament (NF-200) (green), Sox10 (grey) and DAPI (blue). (B) Immunofluorescence images of individual murine myenteric ganglia stained for Er β (Bi) and Er α (Bii). (C) Murine myenteric ganglia culture for 7 days in the presence of the specific Er β agonist LY3201 and with the Er α agonist PPT. One-way ANOVA followed by Dunnett's Multiple Comparison Test (* $p < 0,05$).