

Supplemental Materials

Molecular Biology of the Cell

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Supplemental figure legends

Figure S1

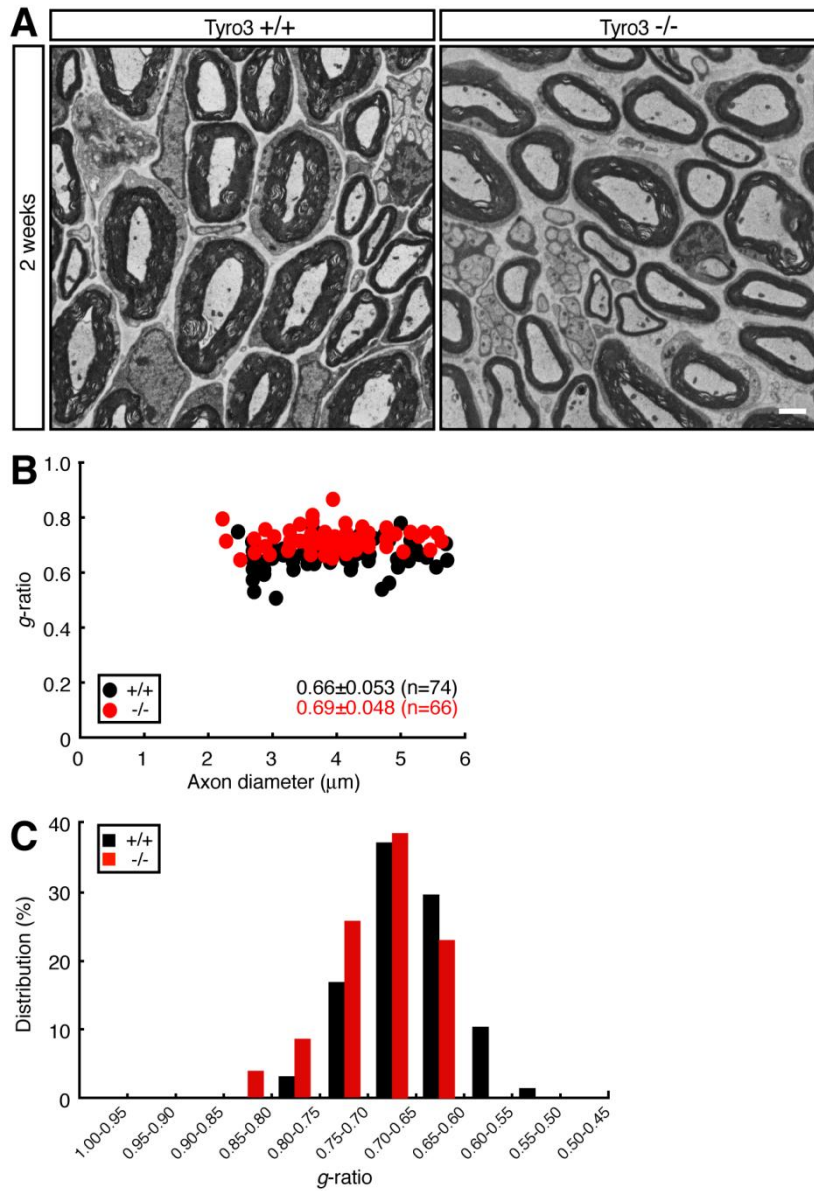


Figure S1. Electron microscopic images of 2-week-old Tyro3 knockout mouse sciatic nerves. (A, B) Electron microscopic images of 2-week-old Tyro3^{+/+} and ^{-/-} mouse sciatic nerves (n=74 and 66, respectively) are shown. The scale bar indicates 1

μm . The g-ratios are plotted for axon diameters. The average g-ratios are also shown in the graph. (C) The data for 2-week-old mice are presented in the form of the relative distributions of the g-ratios.

Figure S2

A

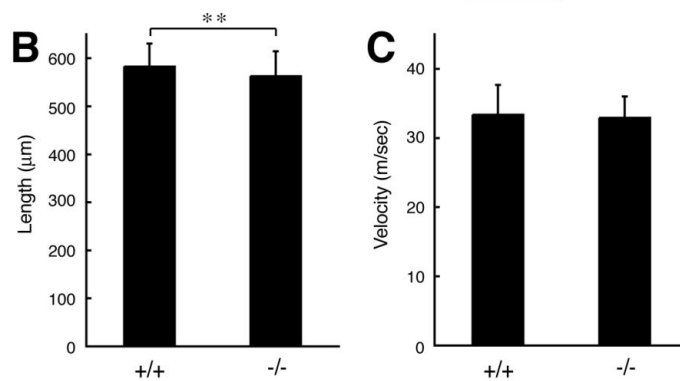
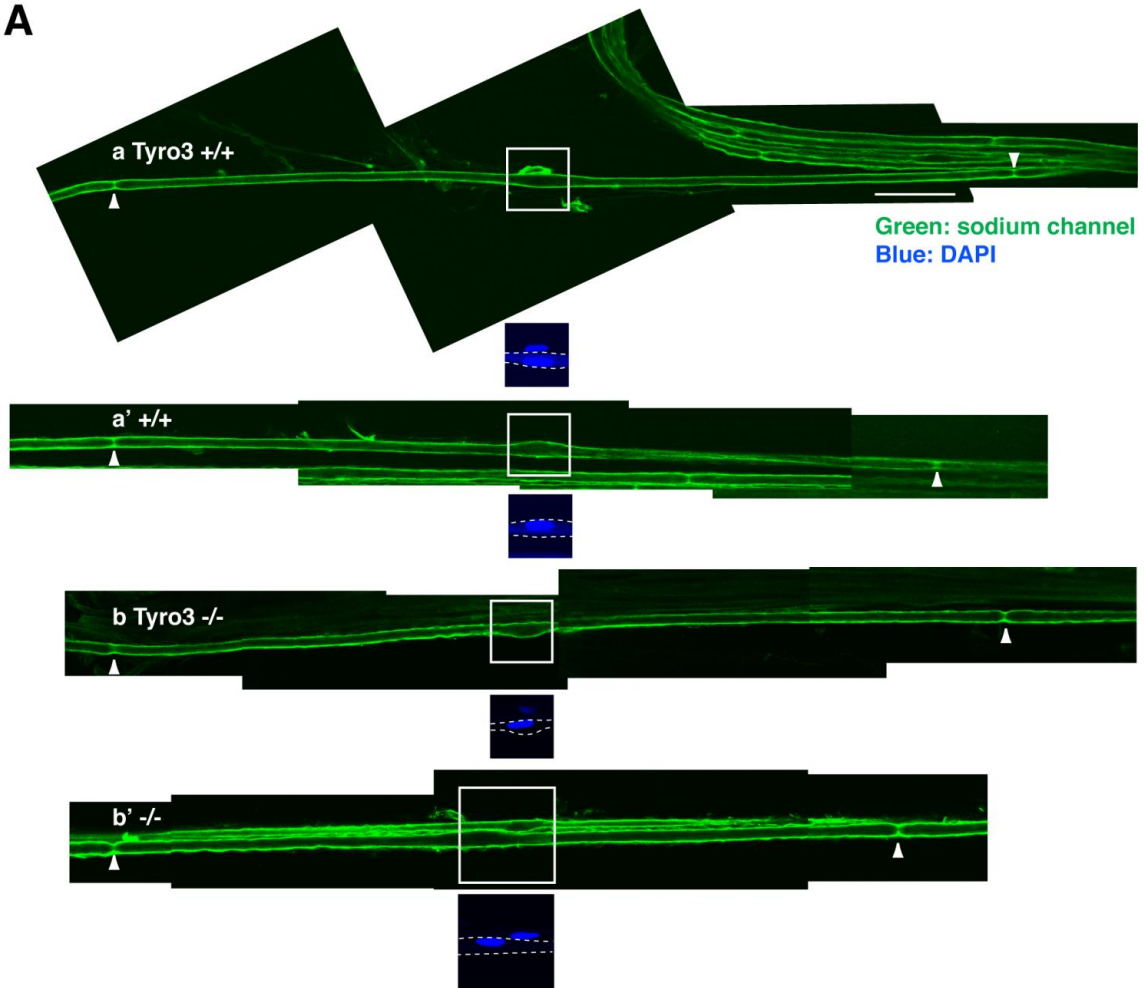


Figure S2. Transverse section analyses and nerve conduction velocity measurement of Tyro3 knockout mouse sciatic nerves. (A, B) Transverse sections of 1-month-old Tyro3 $+/+$ and $-/-$ mouse sciatic nerves (a and a', and b and b' as the respective examples) were teased and stained with an anti-pan-sodium channel antibody (green).

The DAPI (blue)-positive nucleus corresponding to each white square is shown below each nerve in the isolated panel, in which the white dotted lines indicate the outlines of axons. Arrowheads indicate sodium channels expressed in nodes. The scale bar indicates 50 μm . The length between arrowheads was considered as the internode length (**, $p < 0.025$; $n = 12$ for Tyro3^{+/+} mice and $n = 19$ for Tyro3^{-/-} mice). (C) Nerve conduction velocities (m/sec) of sciatic nerves in 45-day-old Tyro3^{+/+} and ^{-/-} mice ($n = 10$) are shown.

Figure S3

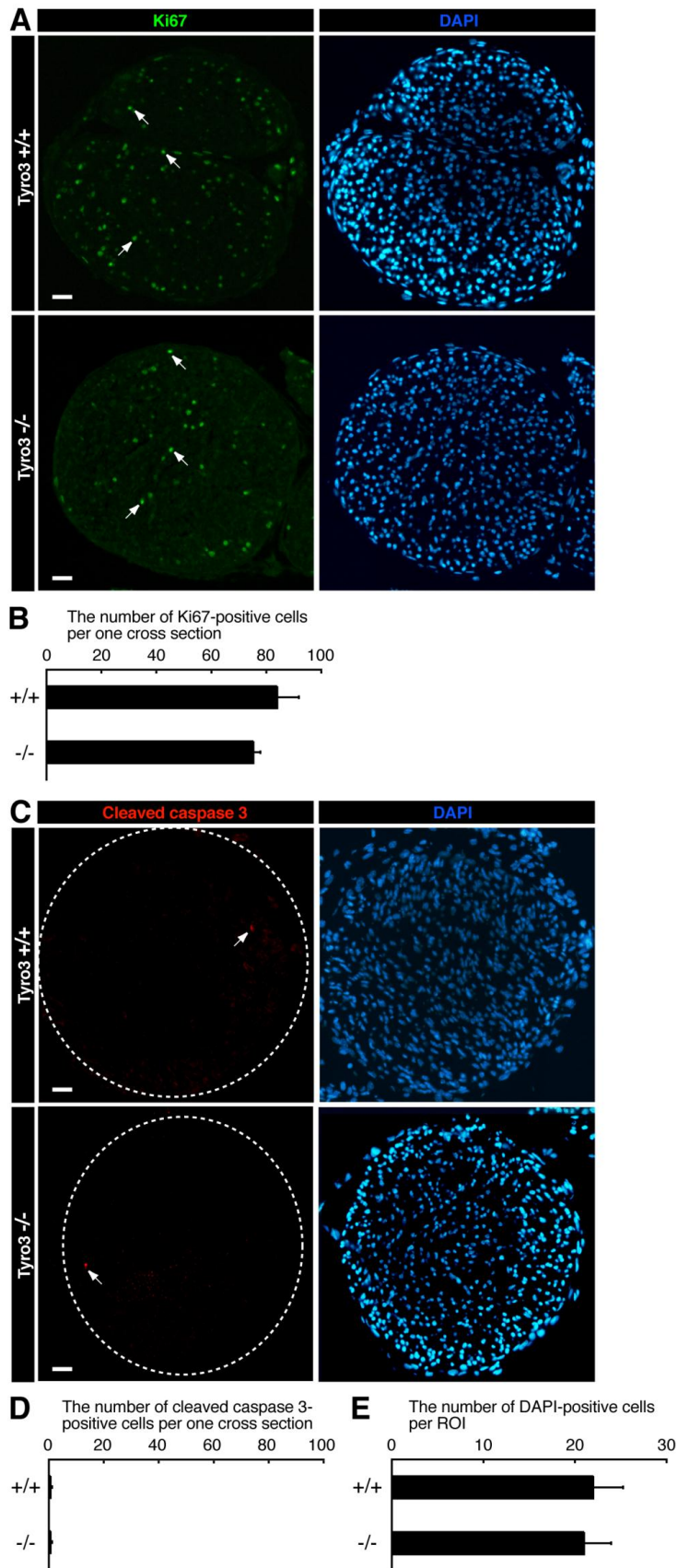


Figure S3. Analyses of Ki67- and cleaved caspase 3-positive cells in Tyro3 knockout mouse sciatic nerves. (A, C) In cross sections of 6-day-old Tyro3^{+/+} and ^{-/-} mouse sciatic nerves, Ki67 antigen (the representative stained nuclei are indicated by arrows) or active, cleaved caspase 3 (indicated with arrows) are shown in green or red fluorescence, respectively. DAPI staining is shown in blue. Regions surrounded with dotted circles indicate outlines of sciatic nerve cross sections. The scale bars indicate 100 μm . (B, D) The number of Ki67- or cleaved caspase 3-positive cells per one cross section was counted (n=3). (E) The number of cells in a 200- μm -square field is shown (n=3).

Figure S4

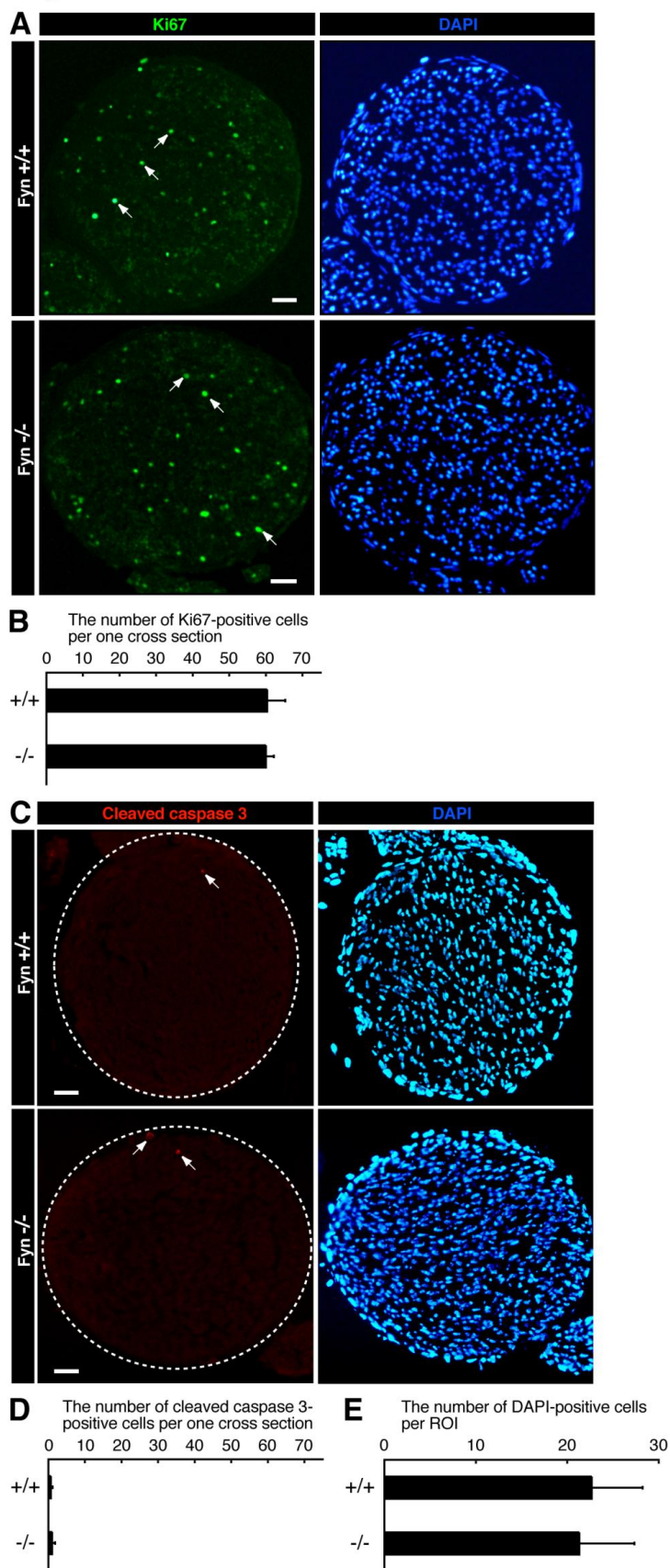


Figure S4. Analyses of Ki67- and cleaved caspase 3-positive cells in Fyn knockout mouse sciatic nerves. In cross sections of 6-day-old Fyn^{+/+} and -/- mouse sciatic nerves, Ki67 antigen (the representative stained nuclei are indicated by arrows) or active, cleaved caspase 3 (indicated with arrows) are shown in green or red fluorescence, respectively. DAPI staining is shown in blue. Regions surrounded with dotted circles indicate outlines of sciatic nerve cross sections. The scale bars indicate 100 μm . (B, D) The number of Ki67- or cleaved caspase 3-positive cells per one cross section was counted (n=3). (E) The number of cells in a 200- μm -square field is shown (n=3).