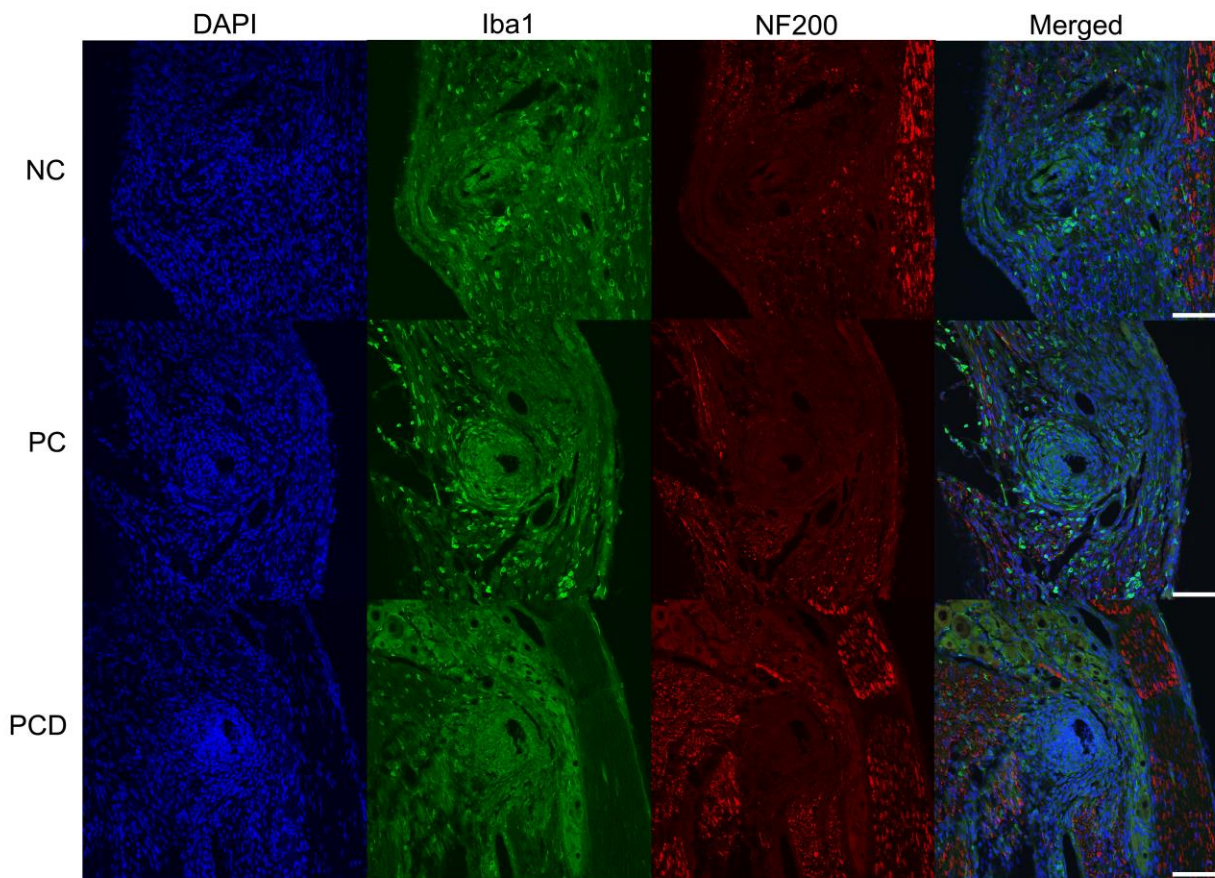
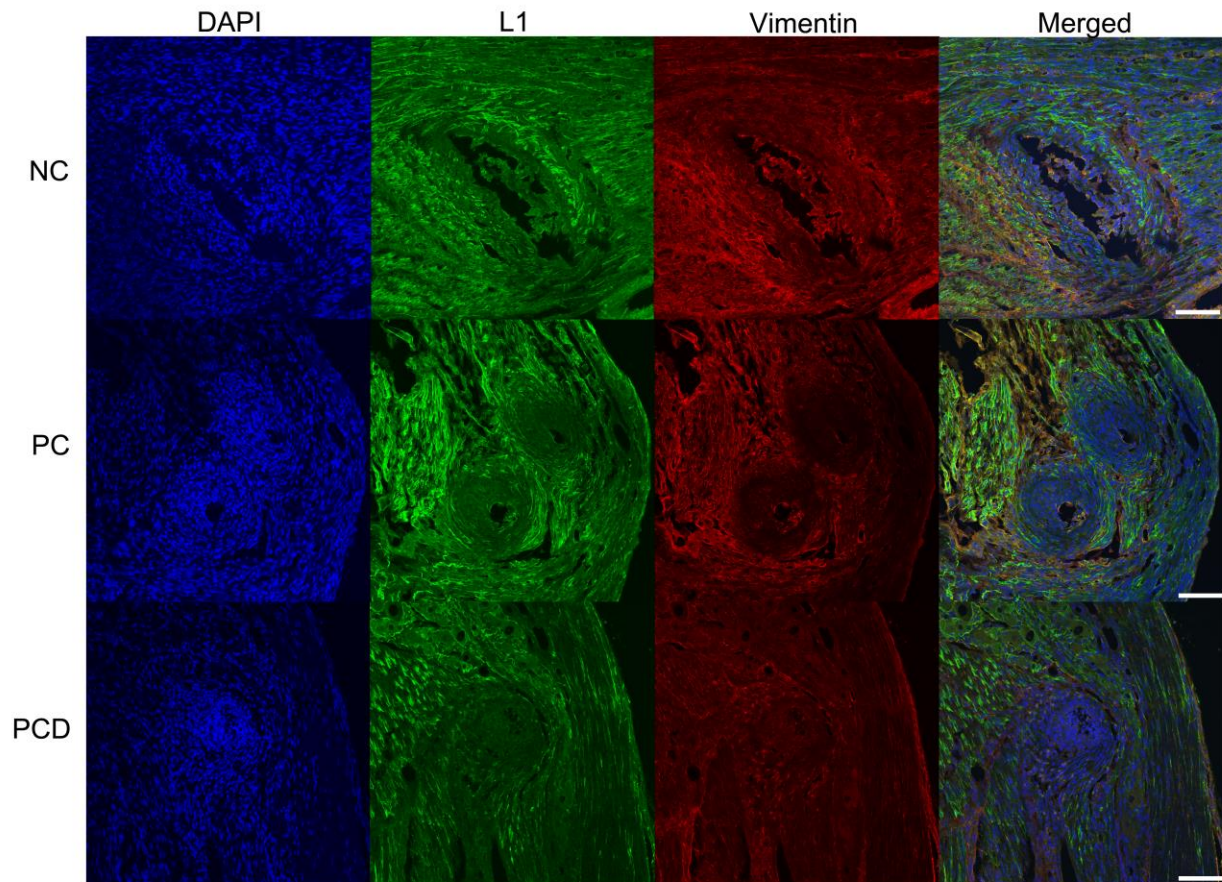


Supplemental Figure 1. NF-200 and Iba-1 expression around the compromised interface. Immunofluorescence images of rat DRG stained for NF200 (red) and Iba1 (green). For one implant in each coating condition, one large interface was observed. The location of the two electrodes could not be visualized, and these interfaces were not included in the quantitative image analysis. Scale bars represent 100 μm .



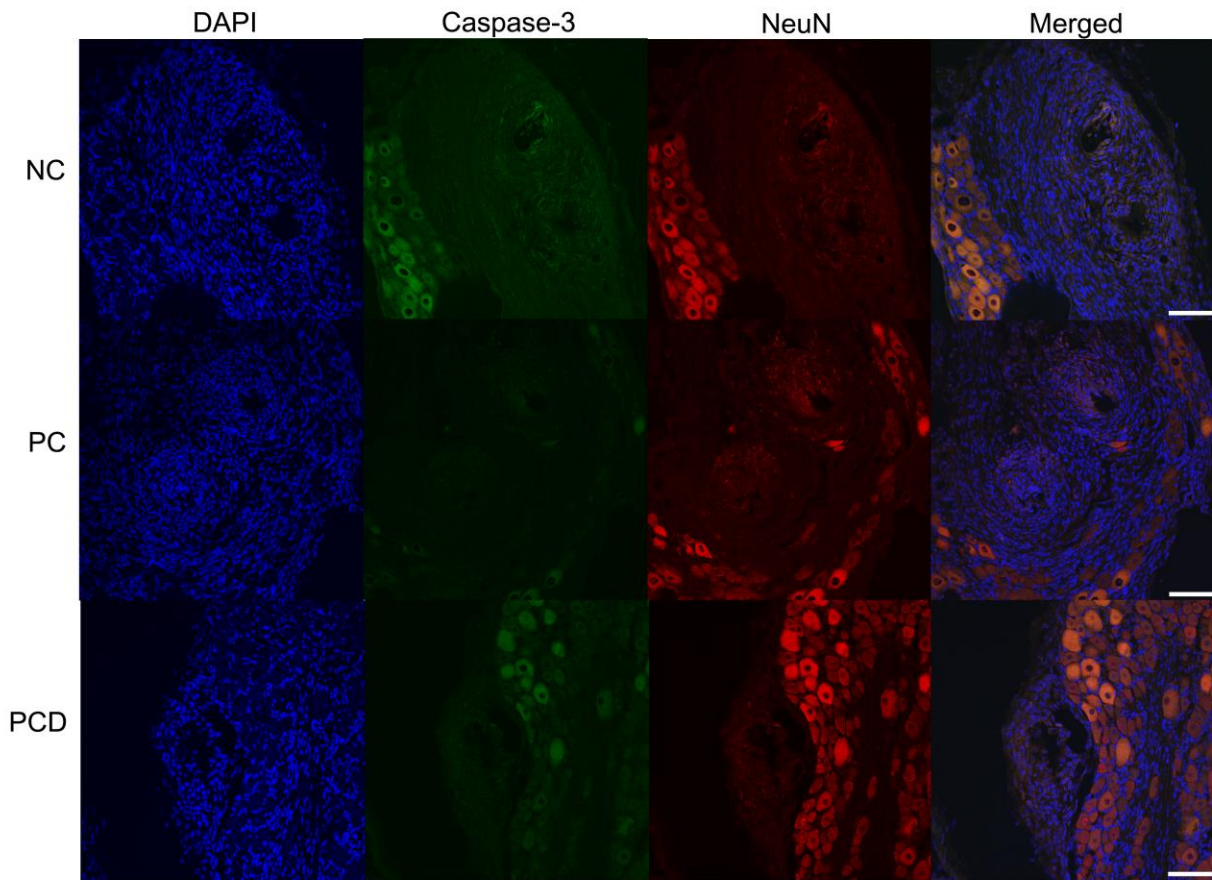
Supplemental Figure 2. NF-200 and Iba-1 expression in the DRG without stimulation.

Immunofluorescence images of rat DRG stained for NF200 (red) and Iba1 (green). NF200 staining was lacking in the area immediately surrounding the implant site. Iba1-positive cells were localized around the implant site and distributed throughout the tissue. Representative images from each of the coating conditions are provided. Scale bars represent 100 μm .

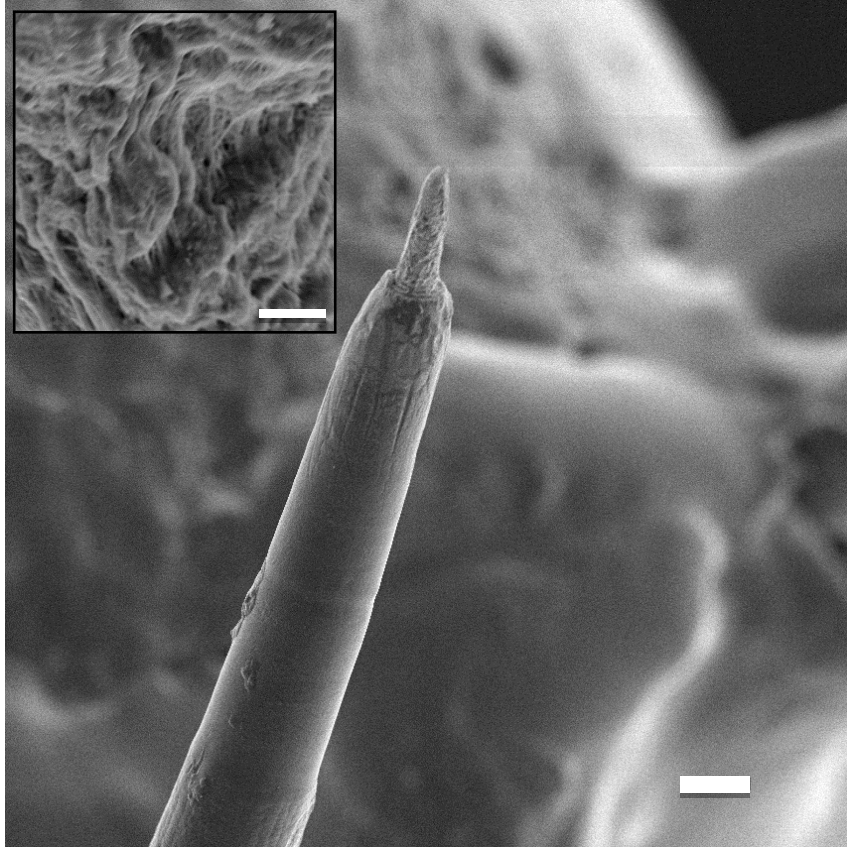


Supplemental Figure 3. L1 and vimentin expression in the DRG without stimulation.

Immunofluorescence images of rat DRG stained for L1 (green) and vimentin (red) following implant of NC, PC and PCD neural probes. L1 staining was found around the implant site and associated with Schwann cells/peripheral myelin. Vimentin staining was relatively evenly distributed with some colocalization with L1. Representative images from each of the coating conditions are provided. Scale bars represent 100 μm .



Supplemental Figure 4. Colocalization of NeuN and activated caspase-3 in the DRG in the absence of repeated stimulation. Immunofluorescence images were used to determine the degree of co-localization between NeuN (red) and cleaved caspase-3 (green). The number of NeuN/caspase-3 positive cells was quantified and reported as a percentage of the total number of NeuN positive cells. Representative images are provided from each of the three coating conditions. Scale bars represent 100 μm .



Supplemental Figure 5. Representative images are provided from an explanted PCD-coated electrode showing an intact coating. Scale bars represent 10 μm (large image) and 1 μm (inset).