

Table. S1. Spacer sequences were designed with highest computed efficacy and specificity score by crispr-era.stanford.edu/, the window of -700 to -50 relative to transcription start site (TSS) was selected for construction of sgRNA.

Target gene	Distance to TSS	Spacer sequence (5'→3')
<i>Bdnf</i>	-75	GAATTCTATTAGGCAAACCTC
<i>Bdnf</i>	-138	GGGGAATTAGGGATACCCCA
<i>Bdnf</i>	-208	GTGCGTGAGTTCGCTAGGAC
<i>Gdnf</i>	-113	GGAGCAAGAGCACGCAATCC
<i>Gdnf</i>	-225	GAGGCCGGTGTGCGAGGTGT
<i>Gdnf</i>	-466	GACACCACGTCAAACCGCGC
<i>Ngf</i>	-155	GTCACAGCAGGTGCCCGGCT
<i>Ngf</i>	-186	GTCCCAGGACCCCTACAACC
<i>Ngf</i>	-691	GCAGTCCCAAGCCTTAAGAC

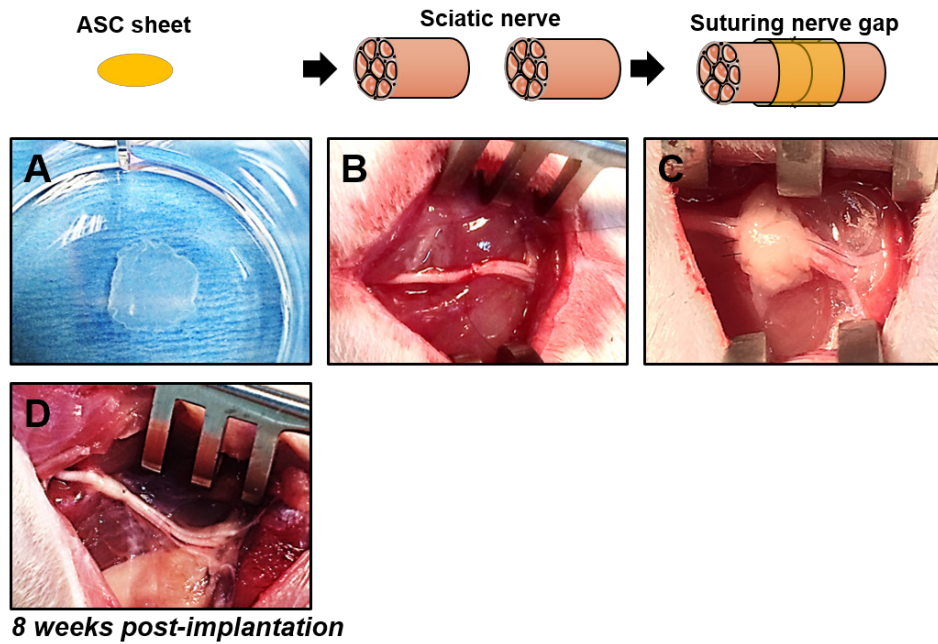


Fig. S1. (A) CRISPRa engineered/mock transduced ASC sheets were prepared and harvested before the animal experiment. (B) The rat sciatic nerve was transected and (C) performed a direct sutured and wrapped with two ASC sheets. (D) The morphology of regenerated sciatic nerve at 8 weeks after implantation.