

Supplementary Materials for
Sympathetic Controls Fate and Function of Adult Sensory Neurons

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This file includes:

Figs. S1 to S3
Tables S1 to S2

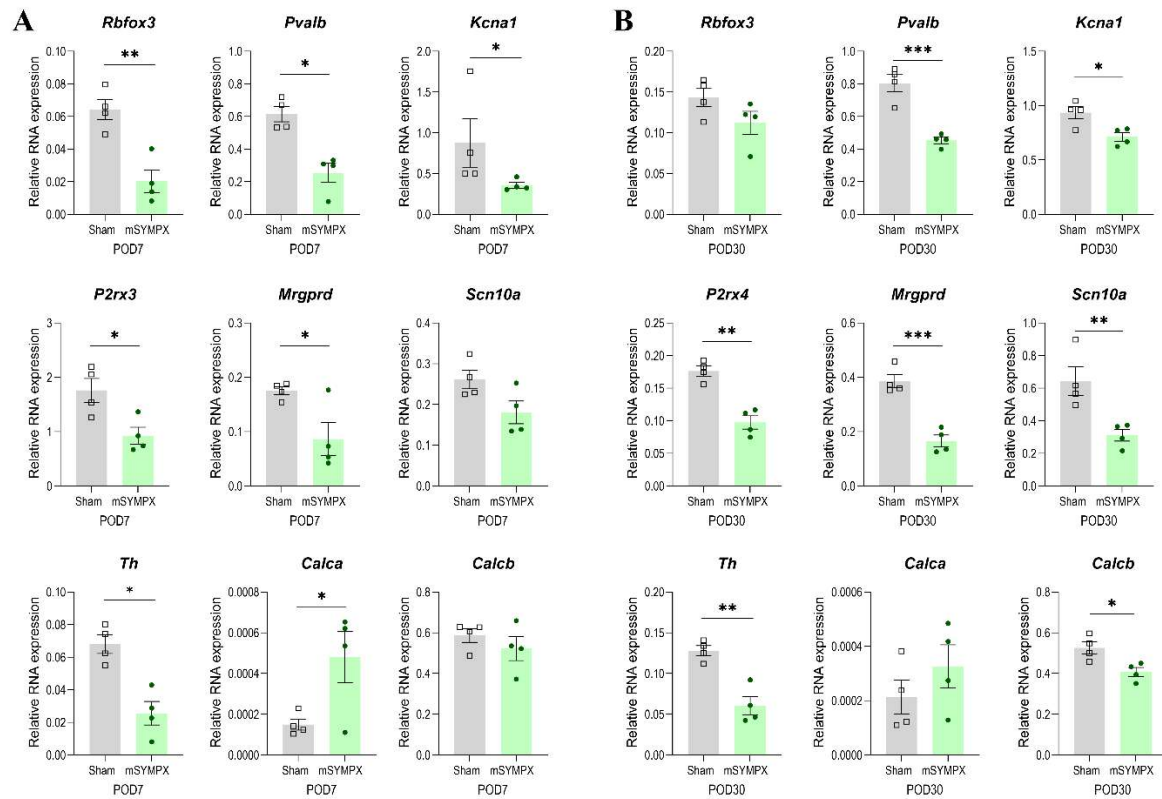
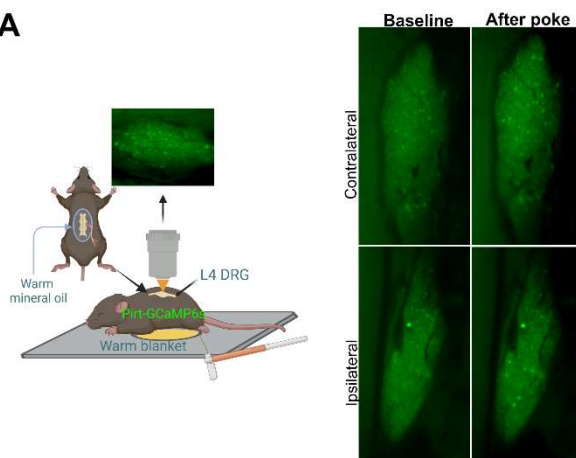


Fig. S1. Changes in gene expression in the DRG with sympathetic denervation.

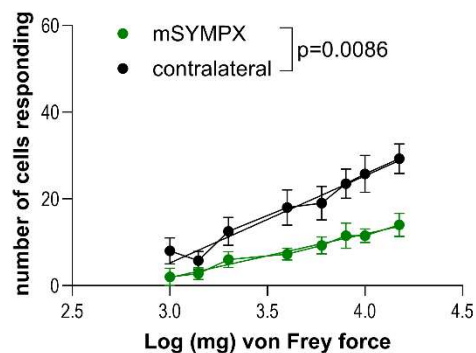
Individual graphs for neuronal marker comparisons between sham and mSYMPX groups on POD7 (A) and POD30 (B) presented in Figure 2C. Data analyzed by unpaired t-test, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, $n=4$.

A



B

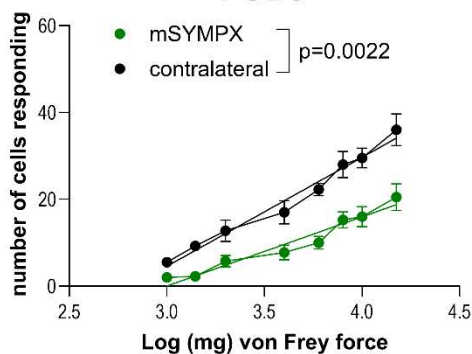
POD1



	mSYMPX	contralateral
Slope	10.05	20.10

C

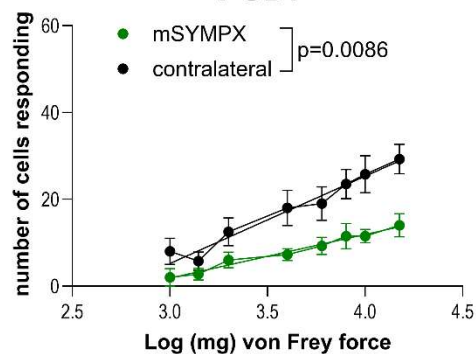
POD3



	mSYMPX	contralateral
Slope	15.94	25.10

D

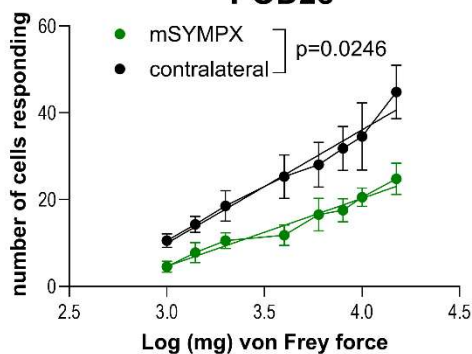
POD7



	mSYMPX	contralateral
Slope	10.05	20.10

E

POD28



	mSYMPX	contralateral
Slope	15.64	26.14

F

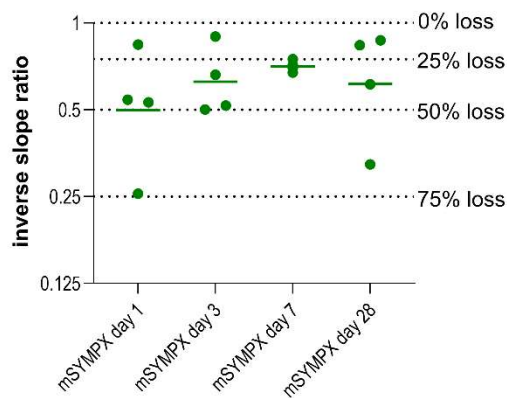


Fig. S2. Altered neuronal responses in mice with mSYMPX.

(A) Schematic of the *in vivo* recording setup used to quantify the number of L4 DRG neurons activated by mechanical stimulation of the paw with von Frey filaments. The number of neurons responding to paw poking was significantly reduced in the L4 DRG after mSYMPX compared with the contralateral DRG on POD1 **(B)**, POD3 **(C)**, POD7 **(D)**, and POD28 **(E)**. Reduced responses were observed for both innocuous and noxious mechanical stimuli. **(F)** Percentage loss of von Frey-responsive neurons, corresponding to data shown in panels **(B–E)**. Data analyzed by simple linear regression; *P* values for each comparison are reported within the corresponding panel.

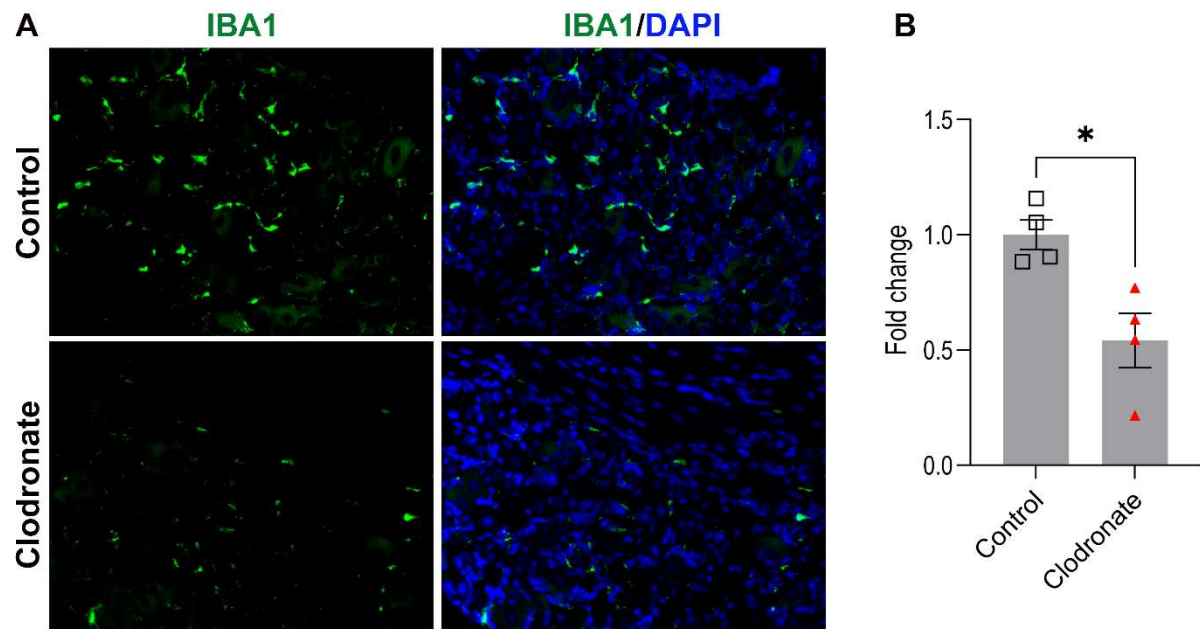


Fig. S3: Macrophage depletion following clodronate liposome administration.

(A) Representative immunofluorescence images of dorsal root ganglia (DRG) showing reduced macrophages after clodronate liposome treatment compared with control liposomes.

Macrophages were labeled with IBA1 (green), and nuclei were counterstained with DAPI (blue).

(B) Quantification of macrophage density expressed as fold change relative to control confirmed a significant reduction following clodronate liposome injection. Data are presented as mean ± SEM and were analyzed using an unpaired *t* test; $P < 0.05$.

Table S1.
Oligonucleotides for qPCR

Protein	Gene	Forward (5'→3')	Reverse (5'→3')	Accession Number
NeuN	<i>Rbfox3</i>	CACCACTCTCTTGTCCGTTTGC	GGCTGAGCATATCTGTAAGCTGC	NM_001285437.1
Parvalbumin	<i>Pvalb</i>	TGCAGACTCCTTCGACCACAAAA	GAGGAGAAGCCCTTCAGAATGG	NM_013645.4
Kv1.1	<i>Kcna1</i>	GAGTCGCACTTCTCCAGTATCC	CCCACGATCTTGCCTCCAATTG	NM_010595.3
P2X3	<i>P2rx3</i>	TCATCAACCGAGCCGTTTCAGCT	ACTCTGTTGGCATAGCGTCCGA	NM_145526.3
MrgprD	<i>Mrgprd</i>	GTCTTCCTCACCTGTTCTCTGC	CGAAGAGAAGCGTGATACGCAG	NM_203490.4
Nav1.8	<i>Scn10a</i>	ATGGAGGTCAGCCAGGACTACA	CTGTGAGGTTGTCCGCACTGAA	NM_009134.3
TH	<i>Th</i>	TGCACACAGTACATCCGTCATGC	GCAAATGTGCGGTCAGCCAACA	NM_009377.2
CGRP1	<i>Calca</i>	GCACTGGTGCAGGACTATATGC	CTCAGATTCCCACACCGCTTAG	NM_007587.2
CGRP2	<i>Calcbl</i>	GAGGAGCAAGAGACTAAGGGCT	GGCACAAAGTTGTCCTTCAGCAC	NM_054084.2
IBA1	<i>Aif1</i>	ATCAACAAGCAATTCCTCGATGA	CAGCATTCGCTTCAAGGACATA	NM_019467.4
CD68	<i>Cd68</i>	TGTCTGATCTTGCTAGGACCG	GAGAGTAACGGCCTTTTTGTGA	NM_001291058.1
CX3CR1	<i>Cx3cr1</i>	GAGTATGACGATTCTGCTGAGG	CAGACCGAACGTGAAGACGAG	NM_009987.4
CCR2	<i>Ccr2</i>	ATCCACGGCATACTATCAACATC	CAAGGCTCACCATCATCGTAG	NM_009915.2
α -1A adrenergic receptor	<i>Adra1a</i>	GCCTCAAGACCGACAAGTCA	TCGGGAAGAAGGACCCAATG	NM_013461.5
α -1B adrenergic receptor	<i>Adra1b</i>	GGCGGGAGTCATGAAGGAAA	GGAGAACAGGGAGCCAAGTG	NM_007416.4
α -1D adrenergic receptor	<i>Adra1d</i>	GTGTCTTCGTCCTGTGCTGGTT	GCCAGAAGATGACCTTGAAGACG	NM_013460.5
α -2A adrenergic receptor	<i>Adra2a</i>	CAGCCCCGTGTATAAAGCCA	GGACAGCAAGGGGAGGTAAC	NM_007417.5
α -2B adrenergic receptor	<i>Adra2b</i>	GCAGAGAGCAGGGTGACAAT	AACCCACTTCCAGTTTGGGG	NM_009633.4
α -2C adrenergic receptor	<i>Adra2c</i>	GCTTCAGGCAATGACCCTCT	AGCCCTAAGTTCACAGCCAC	NM_007418.3
β -1 adrenergic receptor	<i>Adrb1</i>	CTCATCGTGGTGGGTAACGTG	ACACACAGCACATCTACCGAA	NM_007419.3
β -2 adrenergic receptor	<i>Adrb2</i>	GGAACGACAGCGACTTCTT	GCCAGGACGATAACCGACAT	NM_007420.3
β -3 adrenergic receptor	<i>Adrb3</i>	AGAAACGGCTCTCTGGCTTTG	TGGTTATGGTCTGTAGTCTCGG	NM_013462.3
HPRT	<i>Hprt</i>	CTGGTGAAAAGGACCTCTCGAAG	CTGGTGAAAAGGACCTCTCGAAG	NM_013556.2

Table S2:

Antibodies for immunofluorescence and Western Blot

Antibody/Dye	Catalog number	Vendor	Dilution	Host
Caspase-3	AF835	R&D Systems	1:500	Rabbit
CGRP	AB36001-1001	Abcam	1:500	Goat
PGP9.5	Ab108986	Abcam	1:500	Rabbit
NF200	N0142	Sigma	1:600	Mouse
TH	P40101-150	Pel-Freez	1:500	Rabbit
IBA1	GTX100042	Genetex	1:500	Rabbit
XIAP	NBP2-20918	Novus Biologicals	1:500	Rabbit
β -actin	NB600-501	Novus Biologicals	1:2000	Mouse
DAPI	D1306	Invitrogen	1:1000	
IB4 Alexa Fluor™ 488	I21411	Invitrogen	1:500	
IB4 Alexa Fluor™ 647	I32450	Invitrogen	1:500	
NeuroTrace™ 500/525 green	N21480	Invitrogen	1:200	
Neurotrace™ 435/455 blue	N21479	Invitrogen	1:200	
Alexa Fluor™ 488	705-545-147	Jackson Immuno Research	1:300	Goat
Alexa Fluor™ 488	A21206	Invitrogen	1:1000	Rabbit
Alexa Fluor™ 488	A21202	Invitrogen	1:1000	Mouse
Alexa 594	A21207	Invitrogen	1:1000	Rabbit
Alexa 594	715-585-151	Jackson Immuno Research	1:300	Mouse
HRP-linked	7074S	Cell Signaling	1:2000	Rabbit
HRP-linked	7076S	Cell Signaling	1:2000	Mouse