

SUPPLEMENTARY FILES

	Series 1	Series 2
Number of animals in different groups	Control (n=7) Microglia depleted (n=6)	Control (n=7) Microglia depleted (n=6) P2Y12R KO (n=7)
SD induction	Subdural constant current stimulation	Topical application of 1M KCl solution
Monitored physiological variables	DC potential, Electric threshold of SD	DC potential, $[K^+]_e$
Histology	Iba1, P2Y12R, ICAM-1, CD45 IF	Iba1, P2Y12R, Kv2.1, c-fos, GFAP, GS IF

Table 1. Composition and set of experiments related to Experimental Procedures. Animal numbers represent mice included in the analysis. Abbreviations: P2Y12R: P2Y12 receptor; P2Y12R KO, P2Y12R knock out; SD, spreading depolarization; DC, direct current; CBF, cerebral blood flow, $[K^+]_e$, extracellular potassium ion concentration; IF, immunofluorescence; Iba1, ionized calcium-binding adaptor molecule 1; Kv2.1, voltage-gated potassium ion channel 2.1; GFAP, glial fibrillary acidic protein; GS, glutamine synthetase.

KEY RESOURCES TABLE

REAGENT or RESOURCE	SOURCE	IDENTIFIER
Antibodies		
P2Y12R	AnaSpec	55043A
c-fos	Santa Cruz Biotechnology	sc-52
c-fos	Synaptic Systems	226 004
Kv2.1 clone K89/34	NeuroMab	75-014
Iba-1	Wako Chemicals	019-19741
Iba-1	Novusbio	NB100-1028
GFAP	Synaptic Systems	173 006
Glutamine synthetase	Synaptic Systems	367 005
ICAM-1	R&D Systems	AF796
CD45	Bio-Rad	MCA1388
donkey anti-rabbit Alexa 488	Jackson ImmunoResearch	711-546-152
donkey anti-mouse Alexa 488	Jackson ImmunoResearch	715-006-151
donkey anti-chicken Alexa 488	Jackson ImmunoResearch	703-546-155
donkey anti-goat Alexa 488	Jackson ImmunoResearch	705-546-147
donkey anti-rabbit Alexa 647	Jackson ImmunoResearch	711-605-152
donkey anti-mouse Alexa 647	Jackson ImmunoResearch	715-605-150
donkey anti-guinea pig Alexa 647	Jackson ImmunoResearch	706-606-148
donkey anti-rat Alexa 647	Jackson ImmunoResearch	712-606-153
donkey anti-rabbit Alexa 594	Invitrogen	A21207
donkey anti-mouse Alexa 594	Jackson ImmunoResearch	715-586-151
donkey anti-rabbit CF568	Biotium	20098-1mg
Chemicals		
PLX5622 CSF1R inhibitor	Plexxikon Inc.	Available only under MTA
CP-Isflurane	HÓD Állatgyógyászati KFT	N/A
Chlorale hydrate	Sigma-Aldrich/Merck	Cat#C8383
Atropine solution (1mg/ml)	Sigma-Aldrich/Merck	Cat#A-046
Potassium ionophore I - cocktail A	Sigma-Aldrich/Merck	Cat#99311
Phosphate Buffered Saline	Sigma-Aldrich/Merck	Cat#P3813
Sodium azide	Sigma-Aldrich/Merck	Cat#S2002
HEPES buffer	VWR	Cat#441485H
Formaldehyde solution 4%	MOLAR CHEMICALS KFT	Cat#37308-006-410
Glutardialdehyde 25%	MOLAR CHEMICALS KFT	Cat#20240-301-340
Sodium-acetate 3-hydrate	MOLAR CHEMICALS KFT	Cat#06971-101-170
Borax, Sodium tetraborate 10-hydrate	MOLAR CHEMICALS KFT	Cat#07470-101-190
Boric acid powder	MOLAR CHEMICALS KFT	Cat#01670-101-170
Experimental Models: Organisms/Strains		
Mouse: C57BL/6J	The Jackson Laboratory	stock no: 000664
Mouse: P2RY12 KO (genotype: -/-)	Taconic Bioscience	Model#TF1881
Software and Algorithms		
MATLAB	MathWorks	RRID: SCR_001622
SPSS	IBM Corporation	RRID: SCR_002865
ACQKNOWLEDGE	BIOPAC Systems	RRID: SCR_014279
SigmaPlot	Systat Software	RRID: SCR_003210
GraphPadPrism 7	GraphPad Software Inc.	RRID: SCR_002798
ImageJ	NIH	RRID: SCR_002285
NIS Elements AR 4.50.00	Nikon Instruments	RRID: SCR_014329
VividSTORM	doi:10.1038/nprot.2016.002	
Other		
AIN-76A 1/2" Food Pellets	Research Diets	D10001