SUPPLEMENTARY DATA

Genome-Wide Screen and Validation of Microglia Pro-Inflammatory Mediators in Stroke

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Supplementary Table 1. Quality control for RNA sequencing.

Sample name	Clean reads	Clean bases	Error rate (%)	Q20 (%)	Q30 (%)	GC content (%)
Sham 1D-1	131417424	19.71G	0.02	96.61	91.28	49.33
Sham 1D-2	152761736	22.91G	0.02	95.79	89.81	53.66
Sham 1D-3	161623258	24.24G	0.02	95.79	89.8	54.35
Sham 3D-1	154387366	23.16G	0.02	95.88	89.97	54.4
Sham 3D-2	152080990	22.81G	0.02	95.59	89.57	54.68
Sham 3D-3	150211120	22.53G	0.02	96.02	90.35	53.32
Sham 7D-1	133329410	20G	0.02	96.44	91.06	48.9
Sham 7D-2	176385470	26.46G	0.02	95.96	90.19	53.63
Sham 7D-3	139356522	20.9G	0.02	96.68	91.4	48.25
Sham 14D -1	138656436	20.8G	0.02	96.16	91.03	47.67
Sham 14D -2	161505522	24.23G	0.01	97.3	93.12	48.63
Sham 14D-3	160132972	24.02G	0.02	95.98	90.76	51.2
Sham 28D -1	148152290	22.22G	0.02	95.89	90.59	50.98
Sham 28D -2	138897104	20.83G	0.02	96.14	91.01	48.39
Sham 28D -3	181555252	27.23G	0.01	98.14	95.17	47.08
Stroke 1D-1	151527848	22.73G	0.02	95.77	89.86	55.9
Stroke 1D-2	151070176	22.66G	0.02	95.75	89.81	54.91
Stroke 1D-3	165881914	24.88G	0.02	97.11	92.62	48.62
Stroke 3D-1	159735374	23.96G	0.02	95.46	89.36	53.77
Stroke 3D-2	147253844	22.09G	0.02	96.04	90.28	52.46
Stroke 3D-3	170407598	25.56G	0.02	95.86	90	50.63
Stroke 7D-1	178364232	26.75G	0.02	96.57	91.2	50.75
Stroke 7D-2	164376752	24.66G	0.02	96.05	90.46	52.87
Stroke 7D-3	185886506	27.88G	0.02	95.19	88.83	55.45
Stroke 14D -1	160705286	24.11G	0.02	97.12	92.56	51.97
Stroke 14D -2	140030994	21G	0.02	97.2	92.83	51.3
Stroke 14D -3	147363924	22.1G	0.02	97.12	92.52	48.52
Stroke 28D -1	163534926	24.53G	0.01	97.36	93.22	48.64
Stroke 28D -2	181231614	27.18G	0.02	97.05	92.48	51.79
Stroke 28D -3	135746966	20.36G	0.02	97.13	92.65	51.6

Mice were operated with sham or stroke. Total RNAs from the cerebral cortex of mice were then prepared at 1, 3, 7, 14, or 28 days after the operation. Each operation at each time point has three replicates. Samples are then named as the followings: sham or stroke 1D-1, 1D-2, 1D-3, 3D-1, 3D-2, 3D-3, 7D-1, 7D-2, 7D-3, 14D-1, 14D-2, 14D-3, and 28D-1, 28D-2 and 28D-3. A total of 5 μg RNA from each sample was used as the input material for RNA sequencing.

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Supplementary Table 2. RNA sequencing data mapping.

Sample name	Total reads	Total mapped	Multiple mapped	Uniquely mapped
Sham 1D-1	131417424	127236362 (96.82%)	12270319 (9.34%)	114966043 (87.48%)
Sham 1D-2	152761736	130200862 (85.23%)	9320603 (6.1%)	120880259 (79.13%)
Sham 1D-3	161623258	138804703 (85.88%)	11219765 (6.94%)	127584938 (78.94%)
Sham 3D-1	154387366	133499964 (86.47%)	9464303 (6.13%)	124035661 (80.34%)
Sham 3D-2	152080990	126313080 (83.06%)	9549787 (6.28%)	116763293 (76.78%)
Sham 3D-3	150211120	129840391 (86.44%)	7682654 (5.11%)	122157737 (81.32%)
Sham 7D-1	133329410	123031384 (92.28%)	4877298 (3.66%)	118154086 (88.62%)
Sham 7D-2	176385470	153587791 (87.08%)	9500613 (5.39%)	144087178 (81.69%)
Sham 7D-3	139356522	134932112 (96.83%)	10791067 (7.74%)	124141045 (89.08%)
Sham 14D -1	138656436	131947602 (95.16%)	13012087 (9.38%)	118935515 (85.78%)
Sham 14D -2	161505522	150477259 (93.17%)	9770144 (6.05%)	140707115 (87.12%)
Sham 14 D-3	160132972	137970956 (86.16%)	10050583 (6.28%)	127920373 (79.88%)
Sham 28D -1	148152290	125305893 (84.58%)	11503954 (7.76%)	113801939 (76.81%)
Sham 28D -2	138897104	132348990 (95.29%)	11657889 (8.39%)	120691101 (86.89%)
Sham 28D -3	181555252	170518491 (93.92%)	9618227 (5.3%)	160900264 (88.62%)
Stroke 1D-1	151527848	126050834 (83.19%)	9452057 (6.24%)	116598777 (76.95%)
Stroke 1D-2	151070176	125899943 (83.34%)	11320496 (7.49%)	114579447 (75.85%)
Stroke 1D-3	165881914	153989628 (92.83%)	11032950 (6.65%)	142956678 (86.18%)
Stroke 3D-1	159735374	135676871 (84.94%)	10835260 (6.78%)	124841611 (78.16%)
Stroke 3D-2	147253844	129684629 (88.07%)	6216317 (4.22%)	123468312 (83.85%)
Stroke 3D-3	170407598	154375539 (90.59%)	11482189 (6.74%)	142893350 (83.85%)
Stroke 7D-1	178364232	159705985 (89.54%)	8903276 (4.99%)	150802709 (84.55%)
Stroke 7D-2	164376752	144339390 (87.81%)	8020995 (4.88%)	136318395 (82.93%)
Stroke 7D-3	185886506	154787176 (83.27%)	9252976 (4.98%)	145534200 (78.29%)
Stroke 14D -1	160705286	141552949 (88.08%)	9502889 (5.91%)	132050060 (82.17%)
Stroke 14D -2	140030994	135539772 (96.79%)	23388171 (16.7%)	112151601 (80.09%)
Stroke 14D -3	147363924	143045816 (97.07%)	10506738 (7.13%)	132539078 (89.94%)
Stroke 28D -1	163534926	151765206 (92.8%)	11506037 (7.04%)	140259169 (85.77%)
Stroke 28D -2	181231614	155068798 (85.56%)	12488137 (6.89%)	142580661 (78.67%)
Stroke 28D -3	135746966	120278993 (88.61%)	8602710 (6.34%)	111676283 (82.27%)

Mice were operated with sham or stroke. Total RNAs from the cerebral cortex of mice were then prepared at 1, 3, 7, 14, or 28 days after the operation. Each operation at each time point has three replicates. Samples are then named as the followings: sham or stroke 1D-1, 1D-2, 1D-3, 3D-1, 3D-2, 3D-3, 7D-1, 7D-2, 7D-3, 14D-1, 14D-2, 14D-3, and 28D-1, 28D-2 and 28D-3. A total of 5 μg RNA from each sample was used as the input material for RNA sequencing.

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Supplementary Table 3. A list of the DEGs in the cluster one.

Gene ID	Gene	Sham	Stroke	Fold Change	p-value	Gene ID	Gene	Sham	Stroke	Fold Change	p-value
18491	Pappa	0.120	0.51	4.1952	4E-16	12702	Socs3	1.584	26.37	16.6560	8E-69
21463	Tcp11	0.233	0.52	2.2342	3E-15	27279	Tnfrsf12a	3.022	27.24	9.0144	6E-60
11859	Phox2a	0.006	0.61	100.9033	2E-22	22695	Zfp36	2.811	27.40	9.7469	1E-50
54140	Avpr1a	0.181	0.74	4.0804	2E-18	83397	Akap12	7.775	29.32	3.7706	9E-24
69047	Atp2c2	0.321	0.77	2.3910	1E-13	11504	Adamts1	3.314	32.50	9.8049	1E-44
16399	Itga2b	0.331	0.82	2.4781	1E-21	13024	Ctla2a	5.574	36.73	6.5886	6E-46
232431	Gprc5a	0.146	0.93	6.3714	5E-13	12608	Cebpb	11.934	38.23	3.2031	7E-19
21679	Tead4	0.343	0.95	2.7584	3E-29	12475	Cd14	1.347	38.96	28.9299	7E-32
16373	Irx3	0.099	1.15	11.5871	3E-14	18035	Nfkbia	20.167	45.52	2.2570	2E-20
20344	Selp	0.011	1.38	124.5033	2E-38	18263	Odc1	19.296	54.42	2.8203	2E-29
20339	Sele	0.030	1.40	46.4031	2E-28	53324	Nptx2	23.421	54.49	2.3267	4E-22
171530	Ucn2	0.058	1.41	24.4330	2E-33	15901	Id1	25.537	55.35	2.1674	4E-25
14064	F2rl2	0.650	1.41	2.1734	2E-14	110454	Ly6a	24.956	59.37	2.3789	3E-23
74490	Mamstr	0.712	1.43	2.0157	2E-16	193740	Hspa1a	6.170	64.78	10.5001	8E-25
15227	Foxf1	0.568	1.44	2.5317	7E-21	15368	Hmox1	2.380	66.60	27.9848	2E-91
14161	Fga	0.009	1.53	168.3232	2E-22	76650	Srxn1	32.061	68.86	2.1478	3E-21
18442	P2ry2	0.208	1.60	7.6951	4E-31	12575	Cdkn1a	11.954	80.17	6.7066	9E-55
21926	Tnf	0.063	1.66	26.4737	2E-45	15511	Hspa1b	4.862	87.94	18.0876	1E-34
21950	Tnfsf9	0.336	2.00	5.9527	8E-28	16819	Lcn2	2.185	93.96	42.9936	1E-41
16878	Lif	0.197	2.34	11.8939	9E-36	15507	Hspb1	12.856	143.20	11.1384	2E-48
329977	Fhad1	1.155	2.34	2.0302	5E-17	17750	Mt2	184.402	1698.87	9.2129	5E-43
14283	Fosl1	0.025	2.60	103.2222	3E-32	17748	Mt1	544.637	2279.70	4.1857	2E-34
72297	B3gnt3	0.669	2.74	4.0915	6E-14	68278	Ddx39	4.327	8.76	2.0248	5E-25
58801	Pmaip1	1.085	3.06	2.8185	1E-17	18003	Nedd9	2.839	5.76	2.0278	8E-20
104110	Adcy4	1.461	3.12	2.1330	3E-18	213053	Slc39a14	7.226	15.09	2.0876	1E-21
20310	Cxcl2	0.030	3.43	115.4264	2E-15	20680	Sox7	0.562	1.20	2.1426	8E-22
114332	Lyve1	0.532	3.80	7.1508	6E-35	50493	Txnrd1	16.670	37.27	2.2355	7E-25
101533	Klk9	0.013	3.84	284.9056	6E-50	94092	Trim16	0.525	1.17	2.2395	4E-29
75750	Slc10a6	0.025	3.90	157.6564	5E-120	67941	Rps27l	26.034	58.48	2.2464	2E-21
18712	Pim1	1.983	4.17	2.1038	2E-13	12654	Chil1	3.840	8.68	2.2613	5E-18
13614	Edn1	1.212	4.64	3.8230	3E-35	56200	Ddx21	6.310	14.52	2.3011	1E-24
214855	Arid5a	1.908	4.70	2.4631	2E-14	80859	Nfkbiz	1.984	4.61	2.3256	3E-19
16193	Il6	0.066	4.73	71.8821	4E-27	121022	Mrps6	22.825	53.33	2.3366	5E-25
224405	Cyyr1	1.722	5.20	3.0222	7E-35	12479	Cd1d1	0.292	0.71	2.4225	2E-22
16156	Il11	0.113	5.35	47.4396	4E-59	66540	Fam107b	2.214	5.39	2.4337	5E-23
14825	Cxcl1	0.013	5.74	451.4273	5E-17	69660	Tmbim1	11.143	27.64	2.4804	1E-28
72690	Grrp1	2.773	5.89	2.1231	7E-31	13685	Eif4ebp1	3.647	9.35	2.5643	3E-25
101401	Adamts9	0.606	5.91	9.7511	5E-33	20848	Stat3	14.475	43.17	2.9820	5E-41
67664	Rnf125	0.824	6.12	7.4283	2E-64	17874	Myd88	2.312	7.48	3.2351	4E-32
23886	Gdf15	0.043	6.16	143.5938	5E-28	14528	Gch1	0.432	1.45	3.3566	1E-18
20698	Sphk1	1.625	7.28	4.4801	1E-25	108105	B3gnt5	0.200	0.67	3.3694	4E-22
68895	Rasl11a	3.360	7.66	2.2791	3E-31	231805	Pilra	0.298	1.01	3.3915	2E-29
434215	Lrrc32	1.578	7.70	4.8802	8E-13	14173	Fgf2	1.575	5.43	3.4465	5E-32
16600	Klf4	3.308	7.94	2.3997	4E-21	64540	Tspan4	6.263	21.82	3.4833	9E-38
97165	Hmgb2	0.896	8.14	9.0767	1E-45	414801	Itprip	0.340	1.31	3.8356	9E-16
53608	Map3k6	1.845	8.18	4.4361	2E-78	16402	Itga5	1.661	6.74	4.0592	7E-28
18787	Serpine1	0.532	8.24	15.4729	2E-68	108052	Slc14a1	2.372	9.68	4.0809	1E-59
98711	Rdh10	3.009	8.64	2.8732	6E-21	216161	Sbno2	3.115	14.34	4.6024	8E-50
19288	Ptx3	0.096	9.03	93.7834	2E-49	78388	Mvp	2.366	11.37	4.8066	1E-43
18793	Plaur	0.547	10.28	18.8116	1E-24	235379	Gldn	0.285	1.49	5.2150	7E-33
69903	Rasip1	4.265	10.54	2.4716	2E-14	77125	Il33	9.001	48.07	5.3403	6E-25
226040	Tmem252	0.819	10.93	13.3465	1E-46	19124	Procr	0.281	2.33	8.2686	3E-29
17133	Maff	1.778	11.12	6.2522	5E-45	12505	Cd44	1.147	12.22	10.6513	2E-94
17135	Mafk	4.981	11.42	2.2922	8E-18	56708	Clcf1	0.171	2.02	11.8173	5E-31
17112	Tm4sf1	2.707	13.24	4.8907	6E-32	18414	Osmr	1.184	16.03	13.5375	1E-97
230784	Sesn2	5.277	14.07	2.6663	3E-16	245527	Eda2r	0.049	0.68	13.9522	2E-28

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57435	Plin4	6.054	14.79	2.4430	3E-12	12768	Ccr1	0.080	1.31	16.4396	8E-31
80837	Rhoj	1.354	15.13	11.1760	2E-98	68794	Flnc	0.612	10.30	16.8316	3E-91
15200	Hbegf	4.611	15.17	3.2908	5E-61	433470	AA4671970	0.211	3.83	18.1478	6E-25
67951	Tubb6	2.530	15.58	6.1571	5E-43	12051	Bcl3	0.313	6.22	19.8648	2E-116
66282	Tma16	6.202	15.63	2.5193	4E-21	18413	Osm	0.038	0.82	21.7043	1E-35
215418	Csrnp1	6.792	15.68	2.3082	2E-12	56532	Ripk3	0.036	0.77	21.7082	5E-46
18613	Pecam1	6.776	15.70	2.3168	4E-22	20308	Ccl9	0.272	6.94	25.5017	3E-41
20296	Ccl2	0.068	15.83	231.6977	2E-29	11910	Atf3	0.379	11.30	29.7684	2E-56
381823	Apold1	2.131	15.97	7.4910	3E-21	14663	Glycam1	0.046	1.46	31.5514	9E-23
15937	Ier3	6.961	16.19	2.3255	3E-20	20293	Ccl12	0.892	35.25	39.5282	4E-68
17872	Ppp1r15a	7.484	17.13	2.2883	1E-14	20292	Ccl11	0.022	2.86	130.9326	4E-36
12609	Cebpd	3.511	21.84	6.2210	5E-49	16181	Il1rn	0.015	4.04	264.0487	3E-23

The expression levels of the genes in this cluster are increased by more than 2 folds with p-value < 0.05 at 1 day after stroke onset.

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Supplementary Table 4. A list of the DEGs in the cluster two.

Gene ID	Gene	Sham	Stroke	Fold Change	p_value	Gene ID	Gene	Sham	Stroke	Fold Change	p_value	Gene ID	Gene	Sham	Stroke	Fold Change	p_value
217835	Rin3	1.01	5.10	5.042	1E-26	20416	Shc1	3.43	10.07	2.940	9E-21	22320	Vamp8	6.81	23.38	3.432	2E-33
209200	Dtx3l	1.48	5.12	3.461	8E-36	27355	Pald1	2.74	10.08	3.676	4E-18	20973	Syngr2	4.85	23.42	4.833	4E-38
110095	Pygl	1.71	5.12	3.001	5E-16	14247	Fli1	2.15	10.08	4.682	1E-28	67268	Myl12a	9.11	23.53	2.582	6E-23
78816	Gmip	1.63	5.17	3.168	4E-19	234779	Plcg2	1.09	10.09	9.229	3E-36	18024	Nfe2l2	5.57	23.70	4.255	4E-26
109901	Cela1	2.12	5.21	2.461	5E-47	18950	Pnp	4.01	10.10	2.516	1E-18	21803	Tgfb1	3.18	23.70	7.456	9E-39
107321	Lpxn	0.53	5.25	9.954	9E-63	52377	Rcn3	2.61	10.10	3.871	2E-22	192176	Flna	8.83	23.92	2.709	9E-26
80879	Slc16a3	1.75	5.26	2.998	7E-16	17970	Ncf2	1.16	10.11	8.704	3E-42	12508	Cd53	2.42	24.08	9.962	6E-40
18605	Enpp1	0.92	5.27	5.760	1E-22	11810	Apobec1	0.50	10.16	20.294	6E-48	71665	Fuca1	9.70	24.22	2.497	3E-14
77057	Ston1	1.91	5.28	2.766	4E-15	76408	Abcc3	0.59	10.22	17.412	2E-33	21937	Tnfrsf1a	4.12	24.22	5.880	2E-66
11513	Adcy7	1.51	5.30	3.514	2E-22	75547	Akap13	3.74	10.27	2.742	2E-18	105855	Nckap1l	2.54	24.25	9.543	7E-44
217333	Trim47	2.03	5.32	2.622	1E-20	15446	Hpgd	3.17	10.34	3.259	8E-20	19144	Klk6	1.59	24.28	15.246	8E-73
320484	Rasal3	0.56	5.33	9.536	4E-33	68195	Rnaset2b	3.91	10.38	2.656	8E-17	18822	Plod1	5.36	24.51	4.576	4E-22
207839	Galnt6	2.19	5.39	2.463	2E-20	22324	Vav1	0.92	10.40	11.247	7E-48	18301	Fxyd5	4.82	25.19	5.223	2E-27
17095	Lyl1	1.12	5.39	4.821	2E-16	11727	Ang	1.39	10.41	7.475	1E-17	105348	Golm1	5.55	25.38	4.574	8E-23
17110	Lyz1	0.06	5.42	90.623	3E-52	17060	Blnk	2.77	10.43	3.761	1E-38	16331	Inpp5d	3.34	25.55	7.655	6E-32
229595	Adamtsl4	1.64	5.43	3.310	5E-18	16985	Lsp1	3.15	10.46	3.321	4E-25	66395	Ahnak	10.35	25.61	2.474	1E-24
16188	Il3ra	0.52	5.45	10.495	2E-28	16456	F11r	2.37	10.51	4.436	6E-31	12257	Tspo	4.62	25.63	5.546	3E-47
16453	Jak3	1.66	5.46	3.286	5E-23	14595	B4galt1	1.47	10.58	7.193	8E-47	26362	Axl	11.17	26.05	2.332	7E-24
72333	Palld	1.55	5.46	3.529	4E-21	70719	Hmha1	1.16	10.75	9.258	4E-36	12267	C3ar1	0.78	26.12	33.686	8E-62
217069	Trim25	1.45	5.46	3.772	6E-35	71929	Tmem123	3.69	10.76	2.919	2E-22	27419	Naglu	3.77	26.25	6.963	1E-24
212032	Hk3	0.37	5.59	15.023	7E-64	50917	Galns	3.06	10.92	3.565	2E-16	12332	Capg	1.65	26.62	16.126	2E-56
50706	Postn	0.68	5.61	8.242	2E-26	11813	Apoc2	0.06	10.95	186.840	4E-46	12045	Bcl2a1b	0.87	26.65	30.675	1E-72
67896	Ccdc80	2.45	5.64	2.303	4E-21	68480	1110007C09Rik	3.71	10.97	2.955	6E-26	24044	Scamp2	7.44	26.79	3.600	9E-27
15223	Foxj1	1.35	5.64	4.185	2E-19	240168	Rasgrp3	2.71	11.00	4.053	1E-15	12827	Col4a2	8.00	26.82	3.350	1E-28
69774	Ms4a6b	0.59	5.67	9.616	9E-53	94176	Dock2	0.80	11.01	13.809	3E-45	67448	Plxdc2	10.89	27.58	2.532	9E-18
22325	Vav2	2.40	5.68	2.369	1E-18	329679	Fnip2	4.89	11.02	2.251	8E-17	104759	Pld4	2.87	27.58	9.597	6E-35
21815	Tgif1	0.64	5.69	8.901	8E-46	20302	Ccl3	0.10	11.23	116.447	4E-117	16859	Lgals9	3.62	27.71	7.652	6E-50
80287	Apobec3	1.08	5.71	5.285	2E-49	17000	Ltbr	3.73	11.24	3.014	1E-37	17969	Ncf1	2.47	28.32	11.468	1E-42
26382	Fgd2	1.45	5.71	3.937	3E-21	106512	Gpsm3	1.49	11.27	7.541	9E-31	14017	Evi2a	10.51	28.34	2.696	9E-16
13709	Elf1	2.11	5.75	2.723	5E-19	67844	Rab32	0.67	11.28	16.733	1E-33	67893	Tmem86a	8.18	29.03	3.547	1E-24
330217	Gal3st4	1.30	5.76	4.417	2E-16	20469	Sipa1	3.34	11.36	3.397	1E-20	15976	Ifnar2	13.19	29.31	2.222	5E-22
394432	Ugt1a7c	0.31	5.77	18.761	7E-52	69710	Arap1	3.49	11.39	3.264	1E-20	326618	Tpm4	10.03	29.78	2.968	2E-31
14676	Gna15	0.87	5.78	6.626	1E-35	268396	Sh3pxd2b	3.92	11.39	2.905	3E-26	66147	Necap2	10.35	29.85	2.886	6E-22
74055	Plce1	2.08	5.80	2.789	6E-46	18129	Notch2	4.83	11.43	2.367	7E-18	13618	Ednrb	13.77	29.93	2.174	4E-30
15162	Hck	0.75	5.82	7.804	8E-41	11491	Adam17	2.96	11.44	3.863	1E-16	66058	Tmem176a	8.67	29.94	3.454	1E-22
23900	Hcst	1.03	5.82	5.670	1E-26	76281	Tax1bp3	4.16	11.50	2.761	6E-25	68420	Ankrd13a	13.40	30.05	2.243	3E-16
72512	Tmem173	1.17	5.85	5.008	4E-39	243912	Hspb6	3.66	11.54	3.151	3E-42	13733	Adgre1	1.69	30.21	17.873	1E-34
74202	Fblim1	0.38	5.87	15.303	1E-47	233571	P2ry6	1.17	11.58	9.922	2E-44	74048	4632428N05Rik	5.15	30.36	5.889	4E-28
21934	Tnfrsf11a	1.76	5.87	3.344	3E-16	67880	Dcxr	4.58	11.70	2.554	6E-19	20397	Sgpl1	8.61	30.66	3.561	9E-31

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SUPPLEMENTARY DATA

21676	Tead1	2.65	5.89	2.223	2E-28	27056	Irf5	1.48	11.74	7.944	1E-47	12192	Zfp36l1	10.96	30.77	2.807	2E-24
19253	Ptpn18	0.71	5.95	8.367	4E-41	19703	Renbp	1.85	11.76	6.362	3E-37	11853	Rhoc	8.76	30.95	3.534	3E-32
107885	Mthfs	2.54	5.99	2.355	1E-17	14792	Lpcat3	4.88	11.83	2.426	9E-17	21346	Tagln2	6.57	31.07	4.732	2E-44
19106	Eif2ak2	1.87	5.99	3.202	3E-24	279572	Tlr13	0.58	11.89	20.638	6E-48	12606	Cebpa	5.16	31.07	6.024	8E-43
66895	Pxdc1	2.18	6.02	2.767	6E-20	74211	1700017B05Rik	3.74	11.90	3.180	2E-21	16889	Lipa	5.34	31.49	5.902	2E-22
16194	Il6ra	1.50	6.04	4.037	7E-42	67776	Vwa5a	4.56	12.15	2.668	3E-25	17079	Cd180	0.88	32.33	36.837	8E-49
14537	Gcnt1	0.66	6.05	9.234	3E-20	19303	Pxn	5.66	12.20	2.155	3E-22	16414	Itgb2	1.52	32.47	21.328	1E-55
97165	Hmgb2	1.46	6.06	4.143	2E-29	71279	Slc29a3	3.53	12.21	3.460	2E-21	13430	Dnm2	13.32	32.54	2.443	1E-14
30955	Pik3cg	0.78	6.08	7.780	3E-26	18792	Plau	1.45	12.24	8.445	1E-34	11745	Anxa3	4.45	32.55	7.321	1E-32
14159	Fes	0.85	6.09	7.200	3E-44	11717	Ampd3	5.86	12.24	2.089	1E-21	21894	Tln1	7.92	32.56	4.113	2E-24
78558	Htra3	1.39	6.12	4.399	1E-18	216991	Adap2	2.13	12.34	5.799	2E-26	18826	Lcp1	2.38	32.94	13.866	2E-47
17215	Mcm3	0.86	6.15	7.127	1E-28	69769	Tnfaip8l2	1.45	12.41	8.534	7E-49	20345	Selplg	9.64	33.48	3.473	5E-17
226652	Arhgap30	0.84	6.21	7.367	7E-37	13830	Stom	4.27	12.43	2.910	9E-21	81910	Rrbp1	10.91	33.99	3.114	2E-21
67689	Aldh3b1	2.02	6.27	3.101	2E-15	171285	Havcr2	1.12	12.53	11.157	2E-27	65972	Ifi30	2.77	34.05	12.282	4E-52
20963	Syk	0.73	6.27	8.637	2E-34	23880	Fyb	0.89	12.53	14.145	3E-47	52668	Ifi27	12.73	34.41	2.703	5E-20
320487	Heatr5a	1.91	6.29	3.289	1E-16	18753	Prkcd	3.22	12.62	3.924	4E-16	17160	Man2b2	10.63	35.07	3.301	7E-15
11593	Aga	2.81	6.30	2.240	2E-19	22323	Vasp	5.23	12.77	2.441	4E-18	11629	Aif1	4.89	35.15	7.182	7E-42
23921	Sh2b2	2.86	6.31	2.203	6E-26	21391	Tbxas1	0.72	12.79	17.794	7E-39	16195	Il6st	17.39	35.18	2.023	1E-20
100169	Phactr4	3.14	6.42	2.045	3E-19	17916	Myo1f	0.61	12.82	20.939	7E-42	21813	Tgfbr2	4.71	36.40	7.729	5E-36
259300	Ehd2	2.56	6.44	2.517	7E-25	52855	Lair1	2.23	12.92	5.796	2E-28	23890	Gpr34	7.74	36.42	4.704	9E-15
18018	Nfatc1	1.82	6.50	3.570	1E-24	108101	Fermt3	1.34	12.98	9.709	5E-49	11857	Arhgdib	7.58	36.88	4.868	3E-28
12830	Col4a5	0.72	6.51	9.078	8E-24	270084	Lpcat2	3.27	13.02	3.981	3E-27	319939	Tns3	10.36	37.69	3.638	4E-17
24055	Sh3bp2	0.71	6.60	9.243	3E-46	223453	Dap	3.71	13.13	3.544	2E-26	12826	Col4a1	6.14	37.83	6.159	4E-41
235406	Snx33	2.63	6.61	2.515	1E-17	211286	Cln5	5.22	13.16	2.521	2E-18	18858	Pmp22	10.34	38.06	3.681	2E-32
80898	Erap1	2.78	6.62	2.377	2E-23	18542	Pcolce	4.51	13.34	2.958	5E-19	21356	Tapbp	13.18	38.68	2.934	7E-27
78781	Zc3hav1	1.57	6.67	4.248	4E-50	227696	Phyhd1	4.36	13.50	3.094	1E-18	56193	Plek	3.76	38.71	10.290	2E-38
52009	Hn1l	1.62	6.67	4.110	2E-24	170768	Pfkfb3	6.48	13.74	2.121	5E-18	16412	Itgb1	16.07	39.16	2.437	4E-19
102545	Cmtm7	1.33	6.74	5.055	7E-27	73656	Ms4a6c	0.46	13.79	30.289	2E-60	433375	Creg1	11.38	39.57	3.478	1E-20
67742	Samsn1	0.69	6.76	9.827	5E-39	27060	Tcirg1	2.52	14.16	5.628	2E-37	20148	Dhrs3	9.27	39.78	4.290	4E-19
100952	Emilin1	0.83	6.77	8.135	2E-24	54325	Elovl1	4.45	14.22	3.193	1E-22	16658	Mafb	7.66	40.08	5.235	3E-28
73690	Glipr1	0.68	6.81	10.035	1E-24	13423	Dnase2a	1.87	14.22	7.593	5E-35	16409	Itgam	4.47	40.19	8.984	5E-41
12832	Col5a2	0.60	6.84	11.369	2E-18	170743	Tlr7	1.03	14.30	13.916	1E-48	12305	Ddr1	19.50	40.26	2.065	1E-12
100017	Ldlrap1	1.29	6.87	5.324	3E-29	67457	Frmd8	5.05	14.55	2.879	3E-15	114584	Clic1	6.21	40.92	6.591	3E-48
21425	Tfeb	3.42	6.89	2.014	1E-16	14728	Lilrb4a	0.11	14.61	129.066	1E-84	100034251	Wfdc17	0.70	41.09	58.371	9E-42
16543	Mdfic	0.94	6.90	7.349	2E-27	23943	Esyt1	4.17	14.93	3.579	8E-18	21452	Tcn2	7.41	41.82	5.645	2E-23
74096	Hvcn1	0.73	6.92	9.487	6E-31	22436	Xdh	2.40	15.07	6.288	6E-23	29876	Clic4	19.53	41.92	2.147	8E-21
14594	Ggta1	1.29	6.95	5.389	2E-43	65221	Slc15a3	0.60	15.17	25.102	9E-59	140570	Plxnb2	12.72	43.13	3.392	3E-17
16190	Il4ra	1.21	6.98	5.746	7E-62	11690	Alox5ap	2.56	15.18	5.940	3E-27	54445	Unc93b1	5.26	43.73	8.308	8E-45
224109	Nrros	1.67	7.04	4.227	2E-24	83768	Dpp7	4.95	15.18	3.065	3E-17	12111	Bgn	6.32	44.45	7.035	7E-23
17390	Mmp2	0.79	7.06	8.880	2E-30	54353	Skap2	5.21	15.19	2.912	1E-19	30791	Slc39a1	21.37	45.48	2.128	1E-21
16822	Lcp2	0.77	7.10	9.220	1E-40	74191	P2ry13	4.54	15.21	3.350	2E-14	65963	Tmem176b	16.08	45.50	2.830	2E-23
16154	Il10ra	1.53	7.17	4.699	5E-39	76448	Ppp1r18	3.09	15.40	4.991	3E-37	11801	Cd5l	0.01	45.60	4514.420	7E-49
232201	Arhgap25	2.53	7.18	2.837	1E-18	98878	Ehd4	4.62	15.47	3.349	6E-35	11974	Atp6v0e	20.87	47.37	2.270	1E-16
22778	Ikzf1	0.92	7.19	7.814	1E-35	58859	Efemp2	5.04	15.58	3.088	6E-23	58809	Rnase4	7.73	49.05	6.348	4E-18
16773	Lama2	3.10	7.22	2.325	4E-15	320404	Itpkb	6.11	15.60	2.553	1E-15	17159	Man2b1	10.77	49.44	4.589	9E-27

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217262	Abca9	1.98	7.22	3.645	2E-20	83490	Pik3ap1	1.13	15.65	13.879	2E-54	56212	Rhog	16.30	51.75	3.175	8E-18
20540	Slc7a7	0.72	7.23	10.061	9E-37	74646	Spsb1	6.16	15.79	2.563	6E-21	12843	Col1a2	4.74	53.08	11.192	3E-19
70021	Nt5dc2	1.67	7.39	4.412	2E-18	17132	Maf	6.97	15.83	2.272	2E-16	192187	Stab1	2.64	53.30	20.195	1E-24
18439	P2rx7	2.32	7.52	3.237	4E-26	218454	Lhfpl2	3.57	15.86	4.444	7E-22	13036	Ctsh	4.49	53.35	11.878	2E-43
319622	Itpripl2	1.79	7.57	4.222	8E-31	74091	Npl	3.08	16.00	5.194	2E-24	12825	Col3a1	0.76	53.75	70.818	4E-33
226594	Rcsd1	2.22	7.58	3.412	9E-22	18073	Nid1	1.71	16.19	9.494	7E-33	106572	Rab31	21.28	54.17	2.546	6E-18
66824	Pycard	1.36	7.62	5.590	9E-44	215280	Wipf1	3.57	16.29	4.565	2E-24	12268	C4b	5.04	55.26	10.960	3E-80
17085	Ly9	0.08	7.63	94.114	2E-54	12521	Cd82	5.68	16.50	2.905	3E-17	20229	Sat1	21.70	55.43	2.555	1E-23
59010	Sqrdl	2.59	7.64	2.945	2E-19	59126	Nek6	8.07	16.56	2.052	1E-27	14268	Fn1	12.97	56.17	4.332	5E-16
102294	Cyp4v3	2.53	7.67	3.027	4E-30	13601	Ecm1	3.25	16.58	5.097	5E-19	17698	Msn	7.53	57.03	7.574	1E-59
268301	Sowahc	3.00	7.71	2.566	1E-20	58198	Sall1	4.82	16.61	3.449	9E-21	11829	Aqp4	21.66	57.08	2.635	6E-30
19354	Rac2	0.52	7.73	14.820	5E-52	21810	Tgfbi	1.11	16.71	15.060	5E-54	67963	Npc2	12.39	57.30	4.624	7E-32
107581	Col16a1	2.36	7.75	3.284	2E-15	20111	Rps6ka1	5.55	16.77	3.021	7E-18	11747	Anxa5	22.60	57.56	2.548	7E-18
226527	BC026585	2.60	7.76	2.980	3E-18	26433	Plod3	8.00	16.81	2.102	2E-18	11303	Abca1	7.85	59.26	7.552	6E-45
226421	Rab7b	0.48	7.76	16.053	2E-56	13132	Dab2	2.49	16.95	6.806	9E-43	11867	Arpc1b	6.00	59.42	9.903	3E-57
17219	Mcm6	2.87	7.77	2.711	9E-19	67203	Nde1	5.87	17.06	2.906	1E-15	14131	Fcgr3	5.93	59.59	10.052	4E-67
13713	Elk3	2.54	7.84	3.085	4E-25	74760	Rab3il1	3.94	17.09	4.338	2E-28	67865	Rgs10	24.93	61.02	2.447	2E-22
98365	Slamf9	0.70	7.84	11.163	2E-54	15163	Hcls1	1.70	17.17	10.108	2E-42	56356	Gltp	15.25	63.58	4.168	8E-21
20491	Sla	3.03	7.85	2.594	1E-22	30794	Pdlim4	5.80	17.18	2.960	3E-31	71994	Cnn3	26.46	66.86	2.526	2E-43
15216	Hfe	1.86	7.89	4.244	2E-28	13732	Emp3	2.64	17.31	6.546	6E-29	12842	Col1a1	2.73	68.95	25.289	9E-20
16949	Loxl1	0.77	7.89	10.237	1E-21	140780	Bmp2k	4.98	17.44	3.499	6E-20	11520	Plin2	2.94	69.28	23.601	2E-41
52150	Kcnk6	1.34	7.91	5.903	8E-30	209378	Itih5	6.22	17.44	2.803	2E-20	110006	Gusb	4.47	71.90	16.097	1E-33
14276	Folr2	0.41	7.92	19.558	2E-28	29875	Iqgap1	4.88	17.45	3.577	4E-18	16002	Igf2	14.08	77.47	5.500	2E-25
12752	Cln3	2.99	8.01	2.676	5E-16	16403	Itga6	5.12	17.46	3.408	2E-27	20971	Sdc4	35.03	81.13	2.316	3E-27
74761	Mxra8	1.81	8.02	4.428	2E-28	16000	Igf1	1.81	17.57	9.708	6E-13	16784	Lamp2	33.17	81.18	2.447	7E-19
68612	Ube2c	0.22	8.07	37.414	4E-19	67213	Cmtm6	8.16	17.67	2.164	5E-20	13051	Cx3cr1	12.46	83.25	6.683	2E-25
66240	Kcne1l	2.18	8.16	3.742	1E-17	218203	Mylip	5.61	18.24	3.252	3E-20	13057	Cyba	6.81	86.86	12.761	3E-61
269823	Pon3	0.82	8.18	10.013	4E-22	72318	Cyth4	2.41	18.34	7.612	3E-48	16419	Itgb5	11.90	88.23	7.415	6E-26
12273	C5ar1	0.28	8.21	29.677	1E-58	20409	Ostf1	5.59	18.43	3.295	3E-27	56188	Fxyd1	36.00	94.05	2.613	6E-21
239743	Klhl6	0.68	8.26	12.104	5E-40	140497	AF251705	1.37	18.44	13.431	3E-56	99543	Olfml3	9.20	94.82	10.302	9E-32
109305	Orai1	3.38	8.27	2.443	5E-15	80888	Hspb8	6.86	18.57	2.706	2E-30	76960	Bcas1	37.92	97.20	2.563	5E-15
21973	Top2a	0.25	8.37	33.197	2E-19	68119	Cmtm3	3.75	18.69	4.985	3E-28	75612	Gns	32.71	97.96	2.995	2E-17
219144	Arl11	0.36	8.39	23.092	1E-40	16155	Il10rb	4.17	18.80	4.512	3E-26	16011	Igfbp5	40.99	98.99	2.415	5E-30
243771	Parp12	2.81	8.44	3.002	3E-40	80281	Cttnbp2nl	8.27	18.83	2.276	3E-18	16852	Lgals1	16.05	101.30	6.311	6E-24
76088	Dock8	0.85	8.51	9.985	4E-34	12822	Col18a1	0.99	18.97	19.213	2E-29	19025	Ctsa	23.35	101.62	4.352	1E-23
54486	Hpgds	1.71	8.60	5.041	8E-15	15979	Ifngr1	6.90	18.98	2.750	5E-36	52585	Dhrs1	32.55	101.84	3.128	3E-20
217203	Tmem106a	0.35	8.63	24.959	2E-56	71602	Myo1e	5.08	19.14	3.767	3E-24	17084	Ly86	7.08	108.91	15.388	3E-56
22146	Tuba1c	0.68	8.71	12.724	3E-54	17387	Mmp14	3.92	19.16	4.888	5E-25	16008	Igfbp2	24.55	109.05	4.443	2E-16
64099	Parvg	1.60	8.73	5.449	2E-27	22329	Vcam1	8.12	19.47	2.399	1E-29	72042	Cotl1	28.66	120.41	4.202	2E-21
11501	Adam8	0.26	8.74	33.674	2E-67	54519	Apbb1ip	2.63	19.52	7.411	9E-43	83433	Trem2	7.07	128.79	18.215	3E-50
15277	Hk2	0.91	8.74	9.576	1E-49	14726	Pdpn	5.16	19.59	3.799	1E-45	14707	Gng5	46.82	128.80	2.751	3E-22
56857	Slc37a2	0.83	8.79	10.627	7E-35	101488	Slco2b1	3.75	19.59	5.226	5E-27	20716	Serpina3n	4.91	130.97	26.697	1E-181
56693	Crtap	2.74	8.81	3.217	4E-21	74645	Fam46c	0.68	19.79	29.233	2E-31	16792	Laptm5	12.96	132.27	10.204	8E-45
56743	Lat2	1.07	8.96	8.352	1E-66	19128	Pros1	3.71	19.89	5.362	2E-55	15211	Hexa	21.36	136.55	6.391	2E-24
12489	Cd33	1.66	9.00	5.419	2E-31	19205	Ptbp1	8.50	19.93	2.345	3E-28	12978	Csf1r	24.73	143.25	5.793	4E-32
17355	Aff1	4.29	9.08	2.119	1E-22	192193	Edem1	5.64	20.10	3.564	2E-16	13039	Ctsl	33.45	144.96	4.333	1E-40
12642	Ch25h	0.69	9.10	13.274	6E-68	232157	Mob1a	7.52	20.15	2.678	2E-19	80891	Fcrls	9.74	154.62	15.881	3E-36

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17183	Matn4	2.53	9.15	3.619	4E-15	242687	Wasf2	6.31	20.18	3.198	2E-22	22228	Ucp2	12.09	157.20	13.000	2E-26
29810	Bag3	3.42	9.19	2.691	2E-32	12977	Csf1	5.71	20.34	3.563	4E-39	93695	Gpnmb	0.88	162.90	184.479	2E-50
13730	Emp1	0.46	9.21	19.944	1E-54	22319	Vamp3	9.88	20.43	2.069	7E-16	14127	Fcer1g	9.47	171.68	18.130	9E-70
16973	Lrp5	2.75	9.22	3.348	5E-16	56722	Litaf	5.73	20.43	3.565	1E-37	12527	Cd9	20.59	175.61	8.527	1E-56
20852	Stat6	3.65	9.34	2.559	1E-17	232345	A2m	0.47	20.44	43.115	2E-84	11758	Prdx6	72.04	181.91	2.525	7E-19
106878	Smim3	2.86	9.36	3.272	1E-39	213019	Pdlim2	5.14	20.45	3.977	7E-18	12514	Cd68	7.11	182.78	25.711	5E-53
21825	Thbs1	0.53	9.37	17.711	2E-26	74030	Rin2	7.09	20.49	2.888	1E-15	12512	Cd63	45.66	203.23	4.451	2E-46
12986	Csf3r	0.73	9.39	12.881	1E-43	66868	Mfsd1	8.21	20.56	2.506	3E-18	17476	Mpeg1	6.11	214.70	35.141	1E-47
17534	Mrc2	2.24	9.39	4.189	3E-21	12523	Cd84	0.91	20.57	22.573	6E-43	20692	Sparc	77.16	215.07	2.787	2E-20
12495	Entpd1	3.32	9.40	2.832	4E-26	12493	Cd37	2.02	20.66	10.220	1E-38	19141	Lgmn	51.76	264.04	5.101	3E-28
12633	Cflar	3.73	9.42	2.525	4E-16	21812	Tgfbr1	5.55	20.74	3.741	2E-19	64138	Ctsz	21.51	273.93	12.736	3E-44
22379	Fmnl3	3.07	9.43	3.068	1E-22	18791	Plat	10.03	21.06	2.100	2E-19	14824	Grn	22.53	313.43	13.913	2E-29
14747	Cmklr1	1.07	9.58	8.947	4E-47	20375	Spi1	2.37	21.08	8.907	2E-51	22352	Vim	18.85	326.08	17.302	1E-58
13040	Ctss	0.98	9.62	9.842	9E-50	17096	Lyn	2.71	21.39	7.882	9E-45	22041	Trf	97.94	366.56	3.743	7E-20
109225	Ms4a7	0.18	9.70	54.916	2E-32	13032	Ctsc	2.27	21.55	9.486	6E-63	14580	Gfap	53.93	829.64	15.383	2E-89
228961	Npepl1	4.91	9.84	2.004	6E-14	83924	Gpr137b	8.14	21.74	2.670	4E-16	20750	Spp1	7.20	915.32	127.041	2E-49
16391	Irf9	2.86	9.91	3.464	6E-39	12476	Cd151	10.83	21.80	2.013	1E-18	14325	Ftl1	327.68	1321.93	4.034	1E-19
69674	Mif4gd	4.78	9.98	2.087	2E-16	74617	Scpep1	7.19	22.99	3.195	4E-21	13033	Ctsd	157.29	2962.84	18.837	1E-31
20416	Shc1	3.43	10.07	2.940	9E-21	12193	Zfp36l2	10.91	23.12	2.119	5E-17	11816	Apoe	1122.03	4869.31	4.340	5E-17

The levels of the genes in this cluster are increased by more than 2 folds with p-value < 0.05 at 3 days after stroke onset and peaked 4 days later (7 days after stroke).

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SUPPLEMENTARY DATA

Supplementary Table 5. A list of the DEGs in the cluster three.

Gene ID	Gene	Sham	Stroke	Fold Change	p-value	Gene ID	Gene	Sham	Stroke	Fold Change	p-value
56696	Gpr132	0.004	0.51	130.848	2E-23	20969	Sdc1	0.328	3.83	11.673	4E-38
56318	Acpp	0.066	0.51	7.750	9E-21	20311	Cxcl5	0.221	3.91	17.635	1E-36
12399	Runx3	0.005	0.51	109.729	5E-33	17474	Clec4d	0.009	4.14	443.457	9E-36
12766	Cxcr3	0.048	0.60	12.422	3E-24	16197	Il7r	0.177	4.19	23.716	9E-33
14765	Gpr50	0.198	0.62	3.134	8E-20	76681	Trim12a	1.211	4.36	3.604	9E-30
76074	Gbp8	0.071	0.63	8.869	9E-30	19214	Ptgdr	0.317	4.38	13.844	8E-26
21939	Cd40	0.138	0.63	4.597	4E-15	27047	Omd	1.034	4.54	4.385	6E-17
241452	Dhrs9	0.032	0.68	21.469	4E-20	12362	Casp1	1.685	4.62	2.744	4E-16
30925	Slamf6	0.027	0.68	25.395	2E-25	11489	Adam12	0.742	4.66	6.280	3E-14
12525	Cd8a	0.037	0.69	18.669	3E-42	433791	Gm13251	2.213	4.89	2.209	5E-19
329436	Gm14461	0.006	0.69	125.016	3E-44	12818	Col14a1	0.358	4.94	13.829	9E-29
14945	Gzmk	0.056	0.70	12.449	2E-15	12984	Csf2rb2	0.199	5.12	25.713	6E-81
22780	Ikzf3	0.035	0.75	21.375	1E-31	15442	Hpse	0.444	5.17	11.653	2E-30
238393	Serpina3f	0.005	0.76	160.987	2E-18	73149	Clec4a3	0.439	5.30	12.088	6E-22
170786	Cd209a	0.287	0.78	2.715	6E-16	212943	Fam46a	1.637	5.36	3.273	2E-27
327766	Tmem26	0.117	0.82	7.012	5E-22	21922	Clec3b	1.281	5.42	4.230	5E-31
70433	Draxin	0.144	0.82	5.728	3E-26	63986	Gmfg	1.111	5.47	4.921	1E-27
74568	Mlkl	0.080	0.85	10.662	2E-25	14049	Eya2	0.820	5.60	6.829	8E-27
209558	Enpp3	0.193	0.86	4.469	1E-22	208164	Fam180a	1.223	5.60	4.578	2E-21
433801	Gm13212	0.105	0.87	8.317	7E-21	16516	Kcnj15	0.014	5.69	410.777	2E-38
54483	Mefv	0.003	0.91	304.338	5E-22	21928	Tnfaip2	0.193	5.73	29.681	1E-26
18725	Pira2	0.009	0.91	101.464	8E-42	18733	Pirb	0.081	5.79	71.471	2E-54
20343	Sell	0.056	0.97	17.144	3E-16	71934	Car13	0.555	5.82	10.484	8E-29
21426	Tfec	0.031	0.97	31.133	2E-29	214642	Cped1	1.514	5.89	3.890	7E-17
227929	Cytip	0.040	1.02	25.723	9E-44	16847	Lepr	1.482	5.93	4.003	7E-23
50701	Elane	0.025	1.07	42.418	4E-28	209086	Samd9l	2.158	6.11	2.832	5E-19
11630	Aim1	0.307	1.11	3.599	3E-20	18214	Ddr2	1.604	6.21	3.875	4E-20
20471	Six1	0.099	1.12	11.319	5E-15	14727	Lilr4b	0.037	6.43	172.980	9E-59
17312	Clec10a	0.265	1.16	4.362	2E-14	12263	C2	0.616	6.47	10.503	3E-39
16534	Kcnn4	0.165	1.16	7.049	3E-20	11425	Apoc4	0.000	6.67	#VALUE!	2E-14
16421	Itgb7	0.118	1.17	9.925	1E-38	15229	Foxd1	0.833	6.74	8.091	4E-17
12274	C6	0.003	1.17	356.572	3E-67	208777	Sned1	1.542	6.79	4.405	1E-23
15000	H2-DMb2	0.311	1.19	3.815	1E-23	13587	Ear2	0.162	6.85	42.171	9E-63
12481	Cd2	0.052	1.19	23.091	1E-22	21826	Thbs2	2.029	7.50	3.694	8E-19
20299	Ccl22	0.069	1.25	18.080	2E-15	212898	Dse	2.079	7.79	3.747	4E-19
64817	Svep1	0.343	1.25	3.643	1E-26	50908	C1s1	0.384	7.81	20.355	7E-58
19260	Ptpn22	0.199	1.33	6.687	6E-25	83675	Bicc1	1.597	8.01	5.015	5E-22
100861753	Gm21188	0.006	1.40	245.837	6E-23	11433	Acp5	0.099	8.08	81.695	3E-43
74748	Slamf8	0.062	1.42	22.906	9E-27	50501	Prok2	0.345	8.19	23.770	2E-52
22403	Wisp2	0.050	1.48	29.367	3E-34	117167	Steap4	0.116	8.20	70.424	2E-51
12519	Cd80	0.176	1.52	8.627	2E-19	13038	Ctsk	1.683	8.86	5.264	9E-21
665033	Col6a5	0.130	1.52	11.716	5E-27	14863	Gstm2	1.639	8.92	5.443	5E-18
83408	Gimap3	0.055	1.62	29.353	1E-44	226101	Myof	1.080	8.96	8.293	5E-28
20715	Serpina3g	0.118	1.62	13.786	2E-21	14190	Fgl2	0.903	9.15	10.132	9E-45
27052	Aoah	0.097	1.66	17.096	3E-47	16425	Itih2	1.294	9.26	7.157	2E-26
246049	Slc36a2	0.181	1.68	9.243	2E-40	12267	C3ar1	1.440	9.63	6.688	1E-32
217304	Cd300lb	0.006	1.71	265.169	3E-51	50909	C1ra	0.856	9.91	11.588	5E-30
14058	F10	0.017	1.84	106.668	3E-26	19264	Ptprc	0.795	9.94	12.503	9E-54
57781	Cd200r1	0.323	1.89	5.846	3E-16	12494	Cd38	1.389	10.06	7.240	3E-31
71712	Dram1	0.404	1.92	4.770	9E-22	17300	Foxc1	3.022	11.01	3.644	2E-17
22035	Tnfsf10	0.762	2.13	2.798	1E-15	17381	Mmp12	0.003	11.25	4450.032	1E-40
22420	Wnt6	0.646	2.15	3.333	1E-15	12767	Cxcr4	0.633	11.27	17.811	6E-39
18985	Pou2af1	0.038	2.18	56.866	3E-30	16411	Itgax	0.054	11.46	213.512	2E-123

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21384	Tbx15	0.314	2.28	7.250	3E-14	12904	Crabp2	2.293	11.94	5.210	3E-30
54199	Ccrl2	0.307	2.31	7.533	8E-33	13058	Cybb	0.201	12.22	60.930	1E-48
12518	Cd79a	0.158	2.38	15.074	2E-44	12491	Cd36	0.559	12.39	22.157	2E-14
100040462	Mndal	0.312	2.47	7.907	3E-29	68428	Steap3	2.266	13.01	5.741	2E-28
269799	Clec4a1	0.129	2.53	19.607	2E-24	69590	Gpx8	3.271	13.35	4.083	2E-18
16175	Il1a	0.370	2.54	6.869	3E-28	56264	Cpxm1	2.205	14.80	6.712	2E-27
13809	Enpep	0.827	2.57	3.111	1E-19	20568	Slpi	0.080	14.85	186.025	2E-33
55987	Cpxm2	0.848	2.62	3.087	6E-24	71660	Rarres2	5.736	15.84	2.761	1E-16
11695	Alx4	0.476	2.64	5.553	6E-18	13078	Cyp1b1	0.928	15.85	17.076	2E-32
17386	Mmp13	0.021	2.69	127.604	1E-19	16790	Anpep	1.470	17.24	11.723	8E-36
60361	Ms4a4b	0.111	2.71	24.309	2E-52	11746	Anxa4	1.913	17.73	9.267	7E-38
12363	Casp4	0.238	2.72	11.417	7E-36	14619	Gjb2	4.135	19.08	4.614	2E-18
22038	Plscr1	0.860	2.76	3.211	2E-18	102680	Slc6a20a	6.387	19.43	3.043	6E-17
14191	Fgr	0.018	2.84	155.457	2E-47	140792	Colec12	3.857	19.83	5.140	1E-30
107526	Gimap4	0.129	2.85	22.180	1E-26	21824	Thbd	4.761	22.08	4.637	1E-16
63913	Fam129a	0.928	2.86	3.079	1E-17	242341	Atp6v0d2	0.008	23.54	3124.263	1E-58
69816	Mzb1	0.089	2.89	32.413	3E-48	20317	Serpinf1	5.007	23.64	4.721	9E-23
242939	Cpz	0.074	2.94	39.837	1E-28	18295	Ogn	4.326	24.19	5.592	2E-22
16997	Ltbp2	0.086	2.94	34.025	9E-42	11770	Fabp4	0.135	25.62	189.367	2E-56
230979	Tnfrsf14	0.462	3.05	6.603	7E-24	14114	Fbln1	2.417	26.52	10.974	1E-29
12364	Casp12	0.578	3.07	5.303	1E-25	16952	Anxa1	1.101	26.81	24.354	1E-47
71724	Aox3	0.558	3.08	5.526	1E-33	68713	Ifitm1	2.542	28.57	11.239	4E-40
407800	Ecm2	1.255	3.08	2.457	6E-14	56615	Mgst1	7.246	28.71	3.963	6E-27
434484	Sp140	0.338	3.13	9.252	2E-32	16956	Lpl	6.307	29.08	4.611	3E-18
75345	Slamf7	0.013	3.13	242.607	7E-58	14710	Gngt2	3.679	31.26	8.498	3E-44
56620	Clec4n	0.139	3.17	22.783	2E-23	14130	Fcgr2b	1.784	31.54	17.684	7E-75
22259	Nr1h3	1.015	3.17	3.119	8E-23	17022	Lum	1.171	34.41	29.384	2E-34
66857	Plbd1	0.076	3.21	42.242	4E-36	12870	Cp	4.614	36.42	7.894	6E-38
319236	Trim12c	0.925	3.27	3.536	1E-22	11568	Aebp1	5.997	38.20	6.369	6E-24
71683	Gypc	0.688	3.35	4.875	2E-22	216616	Efemp1	5.354	39.39	7.357	8E-29
170744	Tlr8	0.075	3.36	44.790	2E-29	93694	Clec2d	11.016	41.51	3.768	2E-27
69772	Bdh2	1.090	3.39	3.110	5E-21	14969	H2-Eb1	1.020	41.53	40.714	1E-67
12772	Ccr2	0.129	3.49	26.995	7E-18	56644	Clec7a	0.199	43.88	220.246	5E-57
12038	Bche	1.542	3.50	2.269	3E-16	20379	Sfrp4	0.410	46.97	114.644	3E-46
11796	Birc3	0.765	3.61	4.712	6E-27	12925	Crip1	11.868	52.01	4.383	3E-19
71914	Antxr2	0.652	3.62	5.547	3E-25	20305	Ccl6	1.284	53.09	41.352	2E-91
76365	Tbx18	0.794	3.68	4.627	8E-15	12258	Serping1	3.072	55.19	17.967	1E-54
232413	Clec12a	0.321	3.75	11.680	1E-15	12266	C3	0.146	66.76	455.886	7E-47
20204	Prrx2	0.508	3.78	7.441	5E-26	14778	Gpx3	6.985	67.61	9.680	7E-31
67606	Fibin	1.260	3.78	3.002	2E-18	11812	Apoc1	2.798	67.82	24.238	1E-34
114774	Pawr	1.454	3.80	2.615	2E-17	80876	Ifitm2	11.867	71.74	6.045	9E-26

The expression levels of the genes in this cluster are increased by more than 2 fold with p-value < 0.05 at 14 days after stroke onset and peaked 14 days later (28 days after stroke).

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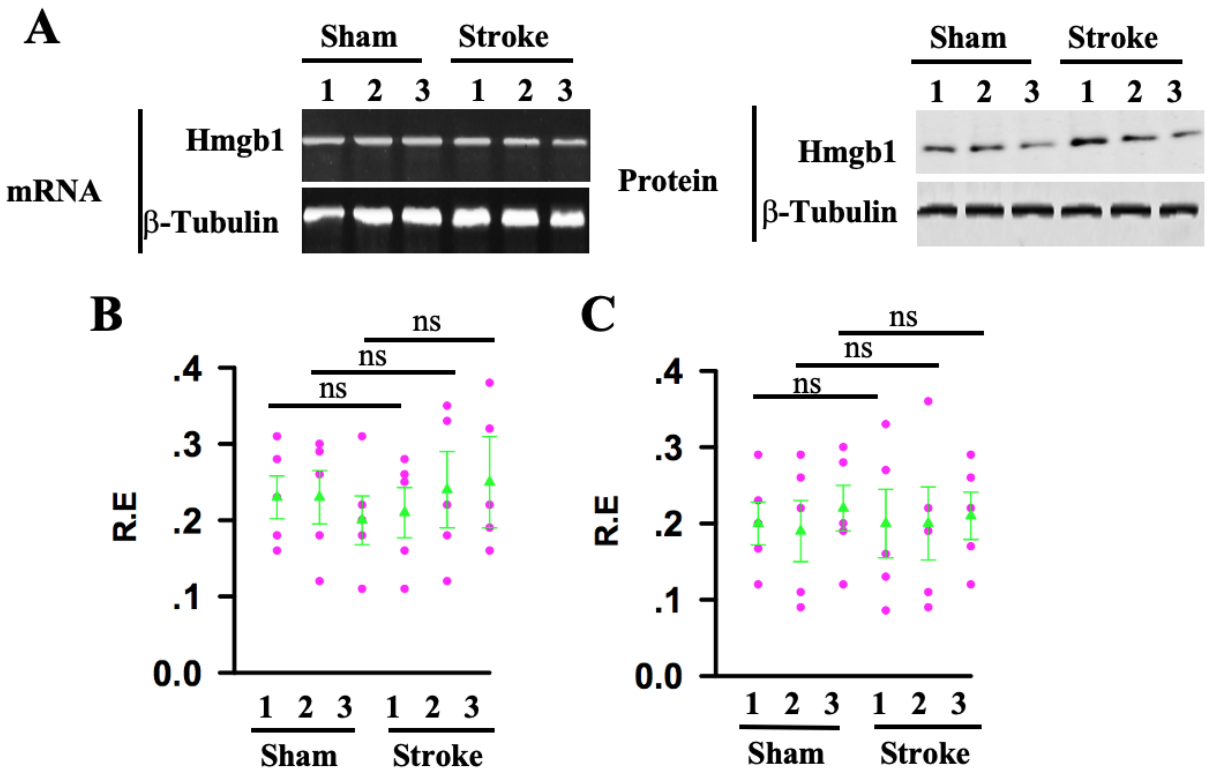
SUPPLEMENTARY DATA



Supplementary Figure 1. Stroke produces no changes in the expression of Hmgb1. A-C) representative images (**A**) of Hmgb1 mRNA and protein in the microglia lysates from mice 1 (lane 1), 2 (lane 2), or 3 (lane 3) days after operation with sham or stroke. Relative expression (R.E) levels of mRNA (**B**) and protein (**C**), defined by normalizing the band intensities of Hmgb1 blots to the respective a-tubulin) in the individual mice (circles) and their averages per group (triangles) are plotted. Data are mean ± SEM (n = 5 mice per group, ns = no significantly differences, *t*-tests).

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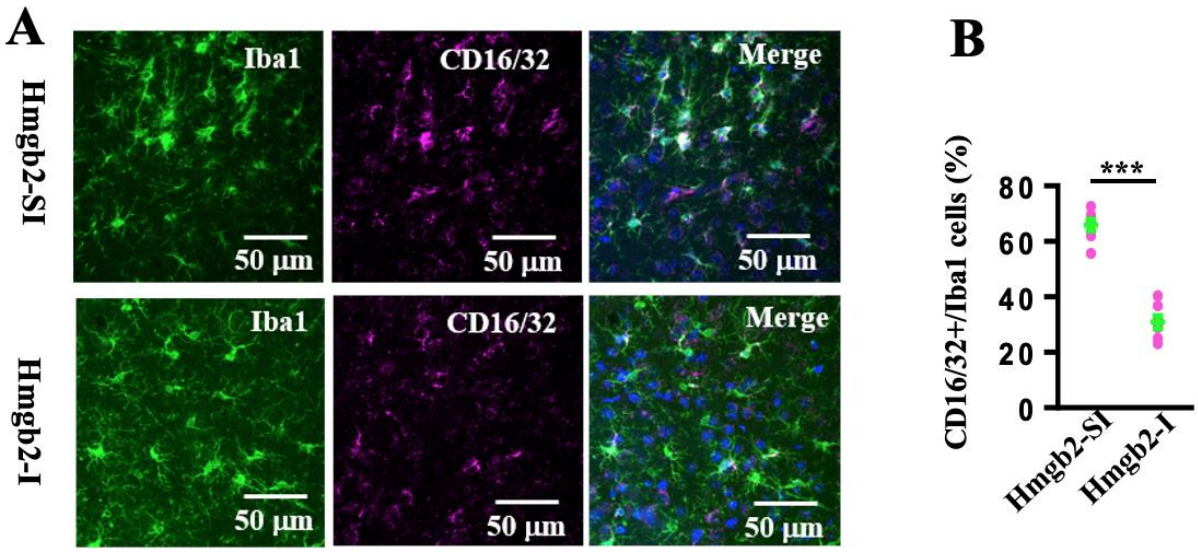
SUPPLEMENTARY DATA



Supplementary Figure 2. Knocking down Hmgb2 in microglia inhibited microglia pro-inflammatory response. (A) representative images show the expression of CD16/32+ (M1 marker, purple) and Iba1 (green) in the cortex at 3days after the operation which operated at 18 days after the injection of the AAV-PHP.eB-Hmgb2-SI/tdT or the AAV-PHP.eB-DIO-Hmgb2-I/tdT virus particles into the tail vein of the Cx3cr1-Cre mice. **(B)** quantification of the percentage of CD16/32+/Iba1+ cells are analyzed and plotted by the individual sections (circles) and their averages per group (triangles). Data are mean ± SEM(n=7 per group, ***p <0.0001, ns = no significantly differences)

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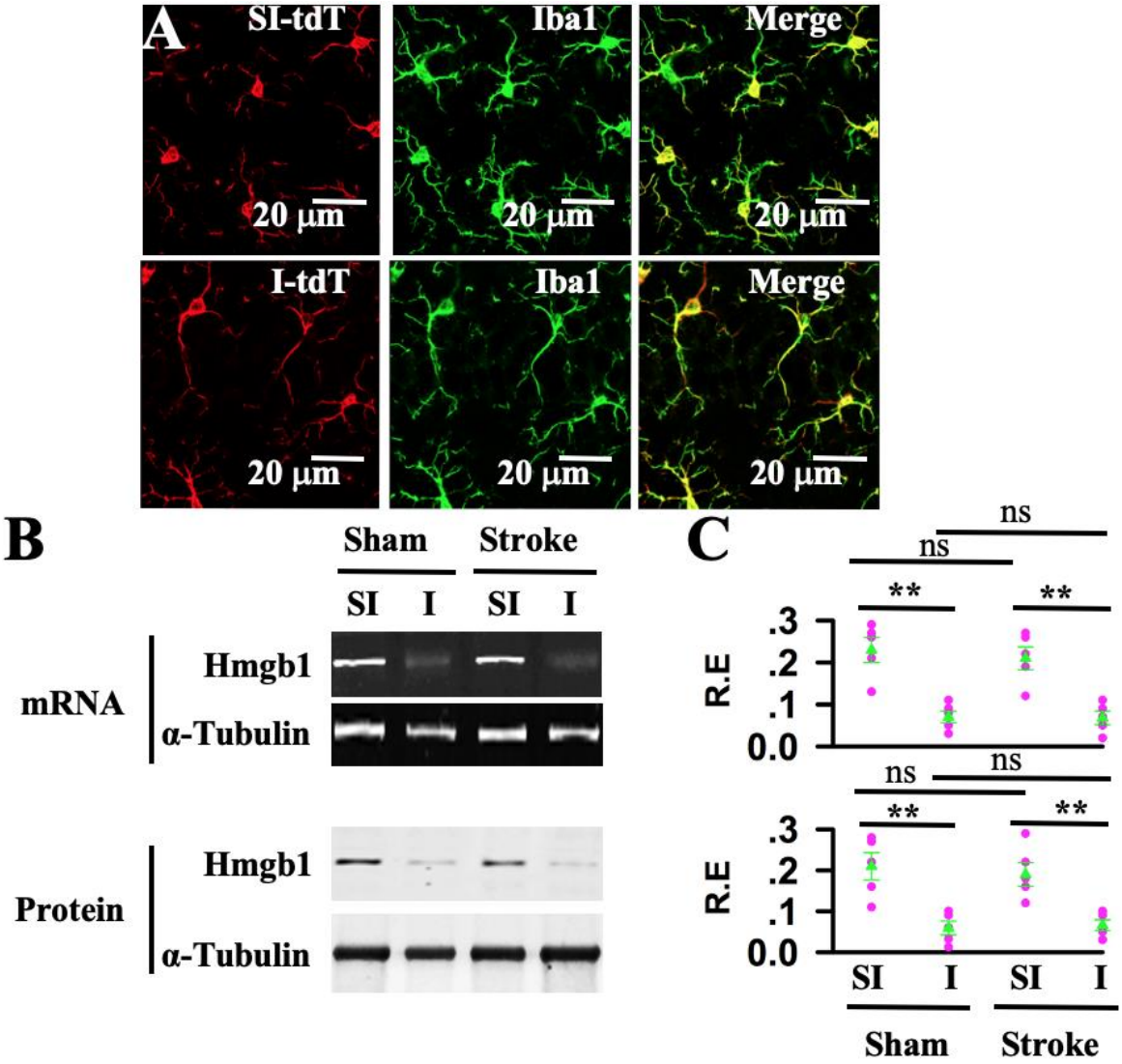

Supplementary Figure 3. **Knocking down Hmgb1 in microglia. (A)** representative images show the expression of Hmgb1-SI (red) or Hmgb1-I (red) in microglia (green) 18 days after the injection of a high titer of the AAV-PHP.eB-DIO-Hmgb1-SI/tdT or the AAV-PHP.eB-DIO-Hmgb1-I/tdT virus particles into the tail vein of Cx3cr1-Cre mice. **(B), (C),** representatives **(B)** of Hmgb1 mRNA and protein in the microglia lysates from mice with the expression of Hmgb1-SI or Hmgb1-I 3 days after operation with sham or stroke. Relative expression (R.E) levels of mRNA **(C, top)** and protein **(C, bottom)** by normalizing the band intensities of Hmgb1 blots to the respective β-tubulin) in the individual mice (circles) and their averages per group (triangles) are plotted. Data are mean ± SEM (n = 5 mice per group, ns = no significantly differences, **p = 0.0011, 0.0017, 0.0035, 0.0037, t-tests).

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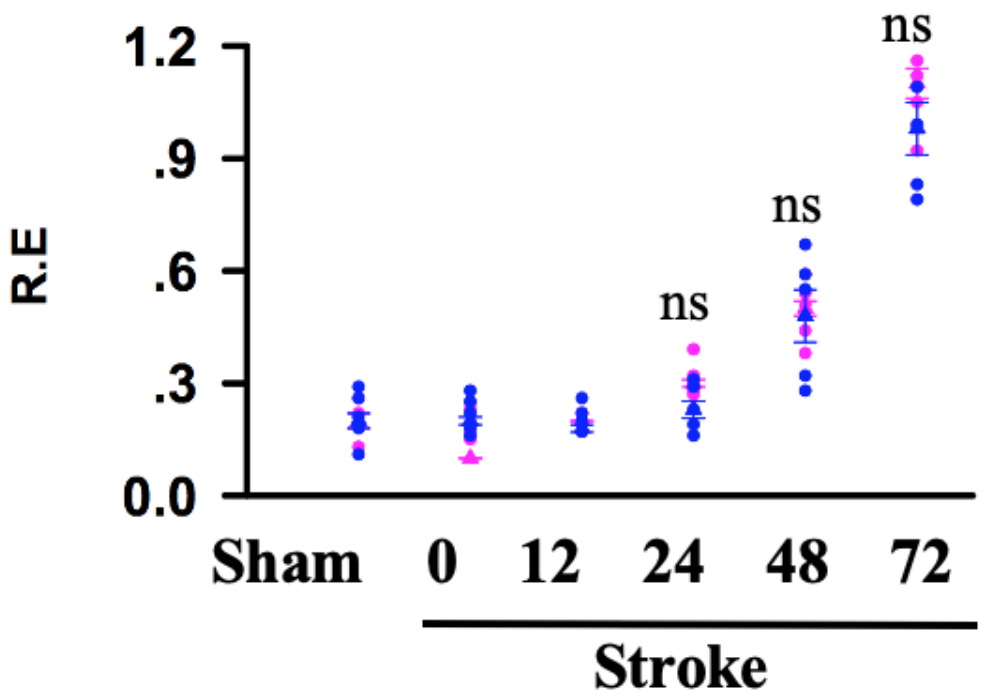

Supplementary Figure 4. **Hmgb1-I does not alter the expression of Hmgb2 in microglia.** Mice with the expression of Hmgb1-I (blue symbols) or Hmgb1-SI (pink symbols) were operated with sham or stroke. 0, 12, 24, 48, or 72 hours after the operation, microglia lysates were prepared and blotted with anti-Hmgb2 or anti-a-tubulin. Relative expression (R.E) levels (defined by normalizing the band intensities of anti-Hmgb2 to the respective a-tubulin) in the individual mice (circles) and their averages per group are plotted. Data are mean ± SEM (n = 5 mice per group, ns = no significantly differences, between Hmgb1-I and Hmgb1-SI, t-tests).

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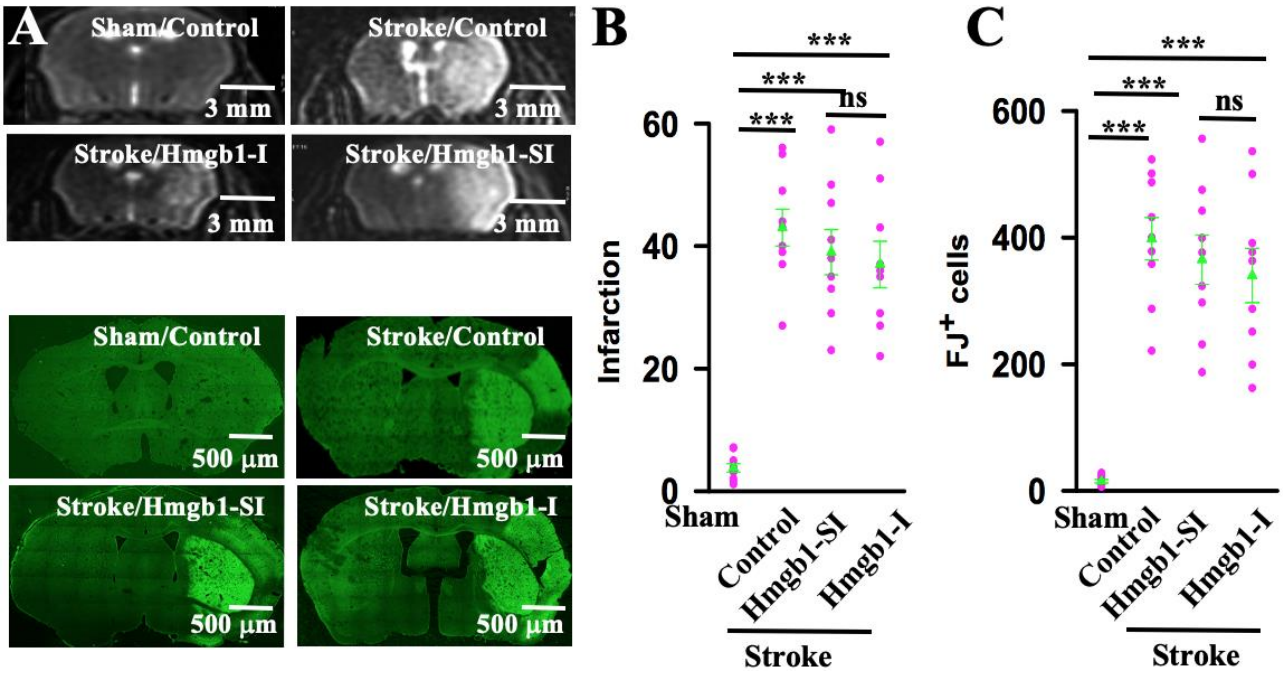
SUPPLEMENTARY DATA



Supplementary Figure 5. Inhibition of Hmgb1 does not protect stroke damages. **(A)** representative T2 weighted MR images (top) and FJ labeling (bottom) from sham and stroke mice without (control) or with the expression of Hmgb1-SI or Hmgb1-I. **(B), (C),** the infarction (B, mean ± SEM, n = 9 mice per group, $F(3, 32) = 35.44$, ns = no significantly differences, ***$p < 0.0001$; BF ANOVA) and the FJ+ cells (C, mean ± SEM, n = 9 mice per group, $F(3, 32) = 28.17$, ns = no significantly differences, ***$p < 0.0001$; BF ANOVA) in the individual mice (circles) and the averages per group (triangles) are plotted.

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