

Datasheet: MCA711

**BATCH NUMBER 166868**

<b>Description:</b>	RAT ANTI MOUSE CD11b
<b>Specificity:</b>	CD11b
<b>Other names:</b>	INTEGRIN ALPHA M CHAIN, MAC-1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	5C6
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	1 mg

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	
Immunofluorescence	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

<b>Target Species</b>	Mouse
<b>Species Cross Reactivity</b>	<p>Reacts with: Human</p> <p><b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.</p>
<b>Product Form</b>	Purified IgG - liquid

<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1 mg/ml
<b>Immunogen</b>	Thioglycollate-elicited peritoneal macrophages (TPM)
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P05555</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">16409</a> Itgam    <a href="#">Related reagents</a></p>
<b>RRID</b>	AB_321292
<b>Fusion Partners</b>	Spleen cells from AO rats were fused with cells of the Y3 rat myeloma cell line
<b>Specificity</b>	<p><b>Rat anti Mouse CD11b antibody, clone 5C6</b> recognizes CD11b, also known as the integrin alpha M chain. CD11b is implicated in various adhesive interactions of monocytes, macrophages and granulocytes as well as in mediating the uptake of complement-coated particles.</p> <p>Rat anti Mouse CD11b antibody, clone 5C6 immunoprecipitates a heterodimer of ~165 and ~95 kDa. This clone also exhibits various functional properties, reportedly inhibiting adhesion <i>in vitro</i> and inflammatory recruitment <i>in vivo</i>. Rat anti Mouse CD11b antibody, clone 5C6 also inhibits delayed hypersensitivity, potentiates bacterial infections and inhibits type 1 diabetes.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul
<b>Histology Positive Control Tissue</b>	Spleen
<b>References</b>	<ol style="list-style-type: none"> <li>Rosen, H. and Gordon, S. (1987) Monoclonal antibody to the murine type 3 complement receptor inhibits adhesion of myelomonocytic cells <i>in vitro</i> and inflammatory cell recruitment <i>in vivo</i>. <a href="#">J Exp Med. 166: 1685-701.</a></li> <li>Rosen, H. <i>et al.</i> (1989) Antibody to the murine type 3 complement receptor inhibits T lymphocyte-dependent recruitment of myelomonocytic cells <i>in vivo</i>. <a href="#">J Exp Med. 169: 535-48.</a></li> <li>Serafini, B. <i>et al.</i> (2000) Intracerebral recruitment and maturation of dendritic cells in the</li> </ol>

- onset and progression of experimental autoimmune encephalomyelitis. [Am J Pathol. 157: 1991-2002.](#)
4. Platt, N. *et al.* (2000) Apoptotic thymocyte clearance in scavenger receptor class A-deficient mice is apparently normal. [J Immunol. 164: 4861-7.](#)
  5. Carenini, S. *et al.* (2001) The role of macrophages in demyelinating peripheral nervous system of mice heterozygously deficient in p0. [J Cell Biol. 152: 301-8.](#)
  6. Engwerda, C.R. *et al.* (2002) Locally up-regulated lymphotoxin alpha, not systemic tumor necrosis factor alpha, is the principle mediator of murine cerebral malaria. [J Exp Med. 195: 1371-7.](#)
  7. Mittal, A. *et al.* (2003) CD11b+ cells are the major source of oxidative stress in UV radiation-irradiated skin: possible role in photoaging and photocarcinogenesis. [Photochem Photobiol. 77 \(3\): 259-64.](#)
  8. Lesnik, P. *et al.* (2003) Decreased atherosclerosis in CX3CR1-/- mice reveals a role for fractalkine in atherogenesis. [J Clin Invest. 111: 333-40.](#)
  9. Di Filippo, C. *et al.* (2005) Cannabinoid CB2 receptor activation reduces mouse myocardial ischemia-reperfusion injury: involvement of cytokine/chemokines and PMN. [J Leukoc Biol. 75 \(3\): 453-9.](#)
  10. Lin, H.H. *et al.* (2005) The macrophage F4/80 receptor is required for the induction of antigen-specific efferent regulatory T cells in peripheral tolerance. [J Exp Med. 201: 1615-25.](#)
  11. Mennini, T. *et al.* (2006) Nonhematopoietic erythropoietin derivatives prevent motoneuron degeneration *in vitro* and *in vivo*. [Mol Med. 12: 153-60.](#)
  12. Saura, J. (2007) Microglial cells in astroglial cultures: a cautionary note. [J Neuroinflammation. 4: 26.](#)
  13. Kondo, Y. *et al.* (2007) Osteopetrotic (op/op) mice have reduced microglia, no Abeta deposition, and no changes in dopaminergic neurons. [J Neuroinflammation. 4: 31.](#)
  14. Halle, A. *et al.* (2008) The NALP3 inflammasome is involved in the innate immune response to amyloid-beta. [Nat Immunol. 9: 857-65.](#)
  15. Devey, L. *et al.* (2008) Tissue-resident Macrophages protect the Liver From Ischemia Reperfusion Injury via a Heme Oxygenase-1-Dependent mechanism. [Mol Ther. 1: 65-72.](#)
  16. Hickman, S.E. *et al.* (2008) Microglial dysfunction and defective beta-amyloid clearance pathways in aging Alzheimer's disease mice. [J Neurosci. 28 \(33\): 8354-60.](#)
  17. Khorrooshi, R. *et al.* (2008) NF-kappaB-driven STAT2 and CCL2 expression in astrocytes in response to brain injury. [J Immunol. 181: 7284-91.](#)
  18. Basso, A.S. *et al.* (2008) Reversal of axonal loss and disability in a mouse model of progressive multiple sclerosis. [J Clin Invest. 118: 1532-43.](#)
  19. Weberpals, M. *et al.* (2009) NOS2 gene deficiency protects from sepsis-induced long-term cognitive deficits. [J Neurosci. 29: 14177-84.](#)
  20. Valerio, A. *et al.* (2009) Leptin is induced in the ischemic cerebral cortex and exerts neuroprotection through NF-kappaB/c-Rel-dependent transcription. [Stroke. 40: 610-7.](#)
  21. Traka, .M. *et al.* (2010) A genetic mouse model of adult-onset, pervasive central nervous system demyelination with robust remyelination. [Brain. 133: 3017-29.](#)
  22. Kim, D. *et al.* (2010) NADPH oxidase 2-derived reactive oxygen species in spinal cord microglia contribute to peripheral nerve injury-induced neuropathic pain. [Proc Natl Acad Sci U S A. 107: 14851-6.](#)
  23. Lu, J. *et al.* (2010) Ursolic acid attenuates D-galactose-induced inflammatory response in mouse prefrontal cortex through inhibiting AGEs/RAGE/NF-kB pathway activation.

[Cereb Cortex. 20: 2540-8.](#)

24. Heneka, M.T. *et al.* (2010) Locus ceruleus controls Alzheimer's disease pathology by modulating microglial functions through norepinephrine. [Proc Natl Acad Sci U S A. 107: 6058-63.](#)
25. Dohi, K. *et al.* (2010) Gp91phox (NOX2) in classically activated microglia exacerbates traumatic brain injury. [J Neuroinflammation. 7: 41.](#)
26. Cui, Y.F. *et al.* (2010) Embryonic stem cell-derived L1 overexpressing neural aggregates enhance recovery in Parkinsonian mice. [Brain. 133: 189-204.](#)
27. Wu, T. *et al.* (2011) Expression and cellular localization of cyclooxygenases and prostaglandin E synthases in the hemorrhagic brain. [J Neuroinflammation. 8:22.](#)
28. Tysseling, V.M.*et al.* (2011) SDF1 in the dorsal corticospinal tract promotes CXCR4+ cell migration after spinal cord injury. [J Neuroinflammation. 8:16.](#)
29. McDonald, J.U. *et al.* (2011) *In vivo* functional analysis and genetic modification of *in vitro*-derived mouse neutrophils. [FASEB J. 25: 1972-82.](#)
30. Terwel, D. *et al.* (2011) Critical Role of Astroglial Apolipoprotein E and Liver X Receptor- $\alpha$  Expression for Microglial A $\beta$  Phagocytosis. [J Neurosci. 31: 7049-59.](#)
31. Sato, A. *et al.* (2012) Interleukin-1 participates in the classical and alternative activation of microglia/macrophages after spinal cord injury. [J Neuroinflammation. 9: 65.](#)
32. Heydenreich, N. *et al.* (2012) C1-inhibitor protects from brain ischemia-reperfusion injury by combined antiinflammatory and antithrombotic mechanisms. [Stroke. 43 \(9\): 2457-67.](#)
33. Yamanaka M *et al.* (2012) PPAR $\gamma$ /RXR $\alpha$ -induced and CD36-mediated microglial amyloid- $\beta$  phagocytosis results in cognitive improvement in amyloid precursor protein/presenilin 1 mice. [J Neurosci. 32 \(48\): 17321-31.](#)
34. Mencl, S. *et al.* (2014) FTY720 does not protect from traumatic brain injury in mice despite reducing posttraumatic inflammation. [J Neuroimmunol. 274 \(1-2\): 125-31.](#)
35. Natrajan, M.S. *et al.* (2015) Retinoid X receptor activation reverses age-related deficiencies in myelin debris phagocytosis and remyelination. [Brain. 138 \(Pt 12\): 3581-97.](#)
36. Kan, M.J. *et al.* (2015) Arginine deprivation and immune suppression in a mouse model of Alzheimer's disease. [J Neurosci. 35 \(15\): 5969-82.](#)
37. Babcock, A.A. *et al.* (2015) Cytokine-producing microglia have an altered beta-amyloid load in aged APP/PS1 Tg mice. [Brain Behav Immun. 48: 86-101.](#)
38. Kaindlstorfer, C. *et al.* (2015) Failure of Neuroprotection Despite Microglial Suppression by Delayed-Start Myeloperoxidase Inhibition in a Model of Advanced Multiple System Atrophy: Clinical Implications. [Neurotox Res. 28 \(3\): 185-94.](#)
39. Liu, Z. *et al.* (2016) Transforming growth factor- $\beta$ 1 acts via T $\beta$ R-I on microglia to protect against MPP(+)-induced dopaminergic neuronal loss. [Brain Behav Immun. 51: 131-43.](#)
40. Garcia-Mesa, Y. *et al.* (2017) Immortalization of primary microglia: a new platform to study HIV regulation in the central nervous system. [J Neurovirol. 23 \(1\): 47-66.](#)
41. Lu, Y. *et al.* (2016) Annexin A10 is involved in the development and maintenance of neuropathic pain in mice. [Neurosci Lett. 631: 1-6.](#)
42. Hristova M *et al.* (2016) Inhibition of Signal Transducer and Activator of Transcription 3 (STAT3) reduces neonatal hypoxic-ischaemic brain damage. [J Neurochem. 136 \(5\): 981-994.](#)
43. Ye, M. *et al.* (2016) Neuroprotective effects of bee venom phospholipase A2 in the 3xTg AD mouse model of Alzheimer's disease. [J Neuroinflammation. 13 \(1\): 10.](#)

44. Nagai, J. *et al.* (2016) Inhibition of CRMP2 phosphorylation repairs CNS by regulating neurotrophic and inhibitory responses. [Exp Neurol. 277: 283-95.](#)
45. Tachibana, M. *et al.* (2016) Rescuing effects of RXR agonist bexarotene on aging-related synapse loss depend on neuronal LRP1. [Exp Neurol. 277: 1-9.](#)
46. Sun, H. *et al.* (2016) Aquaporin-4 mediates communication between astrocyte and microglia: Implications of neuroinflammation in experimental Parkinson's disease. [Neuroscience. 317: 65-75.](#)
47. Shinohara, M. *et al.* (2016) APOE2 eases cognitive decline during Aging: Clinical and preclinical evaluations. [Ann Neurol. 79 \(5\): 758-74.](#)
48. Kami, K. *et al.* (2016) Histone Acetylation in Microglia Contributes to Exercise-Induced Hypoalgesia in Neuropathic Pain Model Mice. [J Pain. 17 \(5\): 588-99.](#)
49. Bisht, K. *et al.* (2016) Dark microglia: A new phenotype predominantly associated with pathological states. [Glia. 64 \(5\): 826-39.](#)
50. Hilla, A.M. *et al.* (2017) Microglia Are Irrelevant for Neuronal Degeneration and Axon Regeneration after Acute Injury. [J Neurosci. 37 \(25\): 6113-24.](#)
51. Paizs, M. *et al.* (2017) Axotomy Leads to Reduced Calcium Increase and Earlier Termination of CCL2 Release in Spinal Motoneurons with Upregulated Parvalbumin Followed by Decreased Neighboring Microglial Activation. [CNS Neurol Disord Drug Targets. 16 \(3\): 356-67.](#)
52. Pulido-Salgado, M. *et al.* (2017) Myeloid C/EBP $\beta$  deficiency reshapes microglial gene expression and is protective in experimental autoimmune encephalomyelitis. [J Neuroinflammation. 14 \(1\): 54.](#)
53. Thomsen, M.S. *et al.* (2017) Synthesis and deposition of basement membrane proteins by primary brain capillary endothelial cells in a murine model of the blood-brain barrier. [J Neurochem. 140 \(5\): 741-754.](#)
54. Laurent, C. *et al.* (2017) Hippocampal T cell infiltration promotes neuroinflammation and cognitive decline in a mouse model of tauopathy. [Brain. 140 \(Pt 1\): 184-200.](#)
55. Schuhmann, M.K. *et al.* (2017) Blocking of platelet glycoprotein receptor Ib reduces "thrombo-inflammation" in mice with acute ischemic stroke. [J Neuroinflammation. 14 \(1\): 18.](#)
56. Rabl, R. *et al.* (2017) Early start of progressive motor deficits in Line 61  $\alpha$ -synuclein transgenic mice. [BMC Neurosci. 18 \(1\): 22.](#)
57. Crépeaux, G. *et al.* (2017) Non-linear dose-response of aluminium hydroxide adjuvant particles: Selective low dose neurotoxicity. [Toxicology. 375: 48-57.](#)
58. Da Ros, F. *et al.* (2017) Targeting Interleukin-1 $\beta$  Protects from Aortic Aneurysms Induced by Disrupted Transforming Growth Factor  $\beta$  Signaling. [Immunity. 47 \(5\): 959-973.e9.](#)
59. Hou, L. *et al.* (2018) Taurine protects noradrenergic locus coeruleus neurons in a mouse Parkinson's disease model by inhibiting microglial M1 polarization. [Amino Acids. 50 \(5\): 547-556.](#)
60. Zheng, J. *et al.* (2018) Evaluation of metastatic niches in distant organs after surgical removal of tumor-bearing lymph nodes. [BMC Cancer. 18 \(1\): 608.](#)
61. Soto, M. *et al.* (2018) Gut microbiota modulate neurobehavior through changes in brain insulin sensitivity and metabolism. [Mol Psychiatry. 23 \(12\): 2287-301.](#)
62. Mouton-Liger, F. *et al.* (2018) Parkin deficiency modulates NLRP3 inflammasome activation by attenuating an A20-dependent negative feedback loop. [Glia. 66 \(8\): 1736-51.](#)
63. Roberts, J.M. *et al.* (2018) Bilateral carotid artery stenosis causes unexpected early

- changes in brain extracellular matrix and blood-brain barrier integrity in mice. [PLoS One. 13 \(4\): e0195765.](#)
64. Cope, E.C. *et al.* (2018) Microglia Play an Active Role in Obesity-Associated Cognitive Decline. [J Neurosci. 38 \(41\): 8889-904.](#)
65. Song, S. *et al.* (2019) Noradrenergic dysfunction accelerates LPS-elicited inflammation-related ascending sequential neurodegeneration and deficits in non-motor/motor functions. [Brain Behav Immun. 81: 374-87.](#)
66. Liu, Z. *et al.* (2019) IL-17A exacerbates neuroinflammation and neurodegeneration by activating microglia in rodent models of Parkinson's disease. [Brain Behav Immun. 81: 630-45.](#)
67. Gomez-Nicola, D. *et al.* (2019) Measuring Microglial Turnover in the Adult Brain. [Methods Mol Biol. 2034: 207-15.](#)
68. Di Benedetto, G. *et al.* (2019) Beneficial effects of curtailing immune susceptibility in an Alzheimer's disease model. [J Neuroinflammation. 16 \(1\): 166.](#)
69. Bernier, L.P. *et al.* (2019) Nanoscale Surveillance of the Brain by Microglia via cAMP-Regulated Filopodia. [Cell Rep. 27 \(10\): 2895-2908.e4.](#)
70. Tunesi, M. *et al.* (2019) Hydrogel-based delivery of Tat-fused protein Hsp70 protects dopaminergic cells in vitro and in a mouse model of Parkinson's disease [NPG Asia Materials. 11: 28.](#)
71. Myhre, C.L. *et al.* (2019) Microglia Express Insulin-Like Growth Factor-1 in the Hippocampus of Aged APP<sub>swe</sub>/PS1<sub>ΔE9</sub> Transgenic Mice. [Front Cell Neurosci. 13: 308.](#)
72. Hauptmann, J. *et al.* (2020) Interleukin-1 promotes autoimmune neuroinflammation by suppressing endothelial heme oxygenase-1 at the blood-brain barrier. [Acta Neuropathol. 140 \(4\): 549-67.](#)
73. Yang, P. *et al.* (2020) Suppression of cGMP-Dependent Photoreceptor Cytotoxicity With Mycophenolate Is Neuroprotective in Murine Models of Retinitis Pigmentosa. [Invest Ophthalmol Vis Sci. 61 \(10\): 25.](#)
74. Poti, F. *et al.* (2020) Impact of S1P Mimetics on Mesenteric Ischemia/Reperfusion Injury. [Pharmaceuticals \(Basel\). 13 \(10\) 298.](#)
75. Wi, R. *et al.* (2020) Functional Crosstalk between CB and TRPV1 Receptors Protects Nigrostriatal Dopaminergic Neurons in the MPTP Model of Parkinson's Disease. [J Immunol Res. 2020: 5093493.](#)
76. Madore, C. *et al.* (2020) Essential omega-3 fatty acids tune microglial phagocytosis of synaptic elements in the mouse developing brain. [Nat Commun. 11 \(1\): 6133.](#)
77. Ellman, D.G. *et al.* (2020) Conditional Ablation of Myeloid TNF Improves Functional Outcome and Decreases Lesion Size after Spinal Cord Injury in Mice. [Cells. 9 \(11\): 2407.](#)
78. Elabi, O. *et al.* (2021) Human  $\alpha$ -synuclein overexpression in a mouse model of Parkinson's disease leads to vascular pathology, blood brain barrier leakage and pericyte activation. [Sci Rep. 11 \(1\): 1120.](#)
79. Yoshizaki, S. *et al.* (2021) Microglial inflammation after chronic spinal cord injury is enhanced by reactive astrocytes via the fibronectin/ $\beta$ 1 integrin pathway. [J Neuroinflammation. 18 \(1\): 12.](#)
80. Mañucat-Tan, N. *et al.* (2021) Hypochlorite-induced aggregation of fibrinogen underlies a novel antioxidant role in blood plasma. [Redox Biol. 40: 101847.](#)
81. Brunialti, E. *et al.* (2021) Inhibition of microglial  $\beta$ -glucocerebrosidase hampers the microglia-mediated antioxidant and protective response in neurons. [J Neuroinflammation. 18 \(1\): 220.](#)

82. Spitzel, M. *et al.* (2022) Dysregulation of Immune Response Mediators and Pain-Related Ion Channels Is Associated with Pain-like Behavior in the GLA KO Mouse Model of Fabry Disease. [Cells. 11 \(11\): 1730.](#)
83. Ji, N. *et al.* (2022) VSIG4 Attenuates NLRP3 and Ameliorates Neuroinflammation via JAK2-STAT3-A20 Pathway after Intracerebral Hemorrhage in Mice. [Neurotox Res. 40 \(1\): 78-88.](#)
84. Shanaki-Bavarsad, M. *et al.* (2022) Astrocyte-targeted Overproduction of IL-10 Reduces Neurodegeneration after TBI. [Exp Neurobiol. 31 \(3\): 173-95.](#)
85. Bretheau, F. *et al.* (2022) The alarmin interleukin-1 $\alpha$  triggers secondary degeneration through reactive astrocytes and endothelium after spinal cord injury. [Nat Commun. 13 \(1\): 5786.](#)
86. Bani-Hani, M. *et al.* (2023) Interactions of Carboxylated Nanodiamonds With Mouse Macrophages Cell Line and Primary Cells [Int J Orthopaed Res. 6 \(1\): 30-43.](#)
87. Saraiva, C. *et al.* (2023) CtBP Neuroprotective Role in Toxin-Based Parkinson's Disease Models: From Expression Pattern to Dopaminergic Survival. [Mol Neurobiol. 60 \(8\): 4246-60.](#)
88. Nelke, C. *et al.* (2023) K(2P)2.1 is a regulator of inflammatory cell responses in idiopathic inflammatory myopathies. [J Autoimmun. 142: 103136.](#)
89. Telianidis, J. *et al.* (2023) Inhibition of insulin-regulated aminopeptidase confers neuroprotection in a conscious model of ischemic stroke. [Sci Rep. 13 \(1\): 19722.](#)
90. Flocke, V. *et al.* (2023) Noninvasive assessment of metabolic turnover during inflammation by *in vivo* deuterium magnetic resonance spectroscopy. [Front Immunol. 14: 1258027.](#)
91. Heiduschka, P. *et al.* (2023) Sub-Retinal Injection of Human Lipofuscin in the Mouse - A Model of "Dry" Age-Related Macular Degeneration? [Aging and disease. 14 \(1\): 184.](#)
92. Lim, J. *et al.* (2018) Characterizing the Mechanisms of Nonopsonic Uptake of Cryptococci by Macrophages. [J Immunol. 200 \(10\): 3539-46.](#)
93. Huang, J.H. *et al.* (2018) NLRX1 Facilitates *Histoplasma capsulatum*-Induced LC3-Associated Phagocytosis for Cytokine Production in Macrophages. [Front Immunol. 9: 2761.](#)
94. Frey, O. *et al.* (2018) Induction of chronic destructive arthritis in SCID mice by arthritogenic fibroblast-like synoviocytes derived from mice with antigen-induced arthritis. [Arthritis Res Ther. 20 \(1\): 261.](#)
95. Friker, L.L. *et al.* (2020)  $\beta$ -Amyloid Clustering around ASC Fibrils Boosts Its Toxicity in Microglia. [Cell Rep. 30 \(11\): 3743-54.e6.](#)
96. Hickman, S.E. *et al.* (2019) Heterozygous CX3CR1 Deficiency in Microglia Restores Neuronal  $\beta$ -Amyloid Clearance Pathways and Slows Progression of Alzheimer's Like-Disease in PS1-APP Mice. [Front Immunol. 10: 2780.](#)
97. Kim, D.H. *et al.* (2018) Effect of growth differentiation factor-15 secreted by human umbilical cord blood-derived mesenchymal stem cells on amyloid beta levels in *in vitro* and *in vivo* models of Alzheimer's disease. [Biochem Biophys Res Commun. 504 \(4\): 933-40.](#)
98. Maezawa, I. *et al.* (2018) Kv1.3 inhibition as a potential microglia-targeted therapy for Alzheimer's disease: preclinical proof of concept. [Brain. 141 \(2\): 596-612.](#)
99. Price, B.R. *et al.* (2020) Therapeutic Trem2 activation ameliorates amyloid-beta deposition and improves cognition in the 5XFAD model of amyloid deposition. [J Neuroinflammation. 17 \(1\): 238.](#)

100. Thygesen, C. *et al.* (2018) Diverse Protein Profiles in CNS Myeloid Cells and CNS Tissue From Lipopolysaccharide- and Vehicle-Injected APP<sub>SWE</sub>/PS1<sub>ΔE9</sub> Transgenic Mice Implicate Cathepsin Z in Alzheimer's Disease. [Front Cell Neurosci. 12: 397.](#)
101. Weekman, E.M. *et al.* (2019) Time course of neuropathological events in hyperhomocysteinemic amyloid depositing mice reveals early neuroinflammatory changes that precede amyloid changes and cerebrovascular events. [J Neuroinflammation. 16 \(1\): 284.](#)
102. Thei, L. *et al.* (2018) Extracellular signal-regulated kinase 2 has duality in function between neuronal and astrocyte expression following neonatal hypoxic-ischaemic cerebral injury. [J Physiol. 596 \(23\): 6043-62.](#)
103. Ryan, F. *et al.* (2018) Ceruloplasmin Plays a Neuroprotective Role in Cerebral Ischemia. [Front Neurosci. 12: 988.](#)
104. Rizzi, C. *et al.* (2018) NGF steers microglia toward a neuroprotective phenotype. [Glia. 66 \(7\): 1395-416.](#)
105. Haight, E.S. *et al.* (2020) Of mice, microglia, and (wo)men: a case series and mechanistic investigation of hydroxychloroquine for complex regional pain syndrome. [Pain Rep. 5 \(5\): e841.](#)
106. Berve, K. *et al.* (2020) Sex- and region-biased depletion of microglia/macrophages attenuates CLN1 disease in mice. [J Neuroinflammation. 17 \(1\): 323.](#)
107. Su, N. *et al.* (2023) Sub-Retinal Injection of Human Lipofuscin in the Mouse - A Model of "Dry" Age-Related Macular Degeneration? [Aging Dis. 14 \(1\): 184-203.](#)
108. Geladaris, A. *et al.* (2024) BTK inhibition limits microglia-perpetuated CNS inflammation and promotes myelin repair. [Acta Neuropathol. 147 \(1\): 75.](#)
109. Venezia, S. *et al.* (2021) Toll-like receptor 4 deficiency facilitates  $\alpha$ -synuclein propagation and neurodegeneration in a mouse model of prodromal Parkinson's disease. [Parkinsonism Relat Disord. 91: 59-65.](#)
110. Klawonn, A.M. *et al.* (2021) Microglial activation elicits a negative affective state through prostaglandin-mediated modulation of striatal neurons. [Immunity. 54 \(2\): 225-234.e6.](#)
111. Wang, F. *et al.* (2021) Neutralization of Hv1/HVCN1 With Antibody Enhances Microglia/Macrophages Myelin Clearance by Promoting Their Migration in the Brain. [Front Cell Neurosci. 15: 768059.](#)
112. Ryan, F. *et al.* (2024) Ferroptosis inhibitor improves outcome after early and delayed treatment in mild spinal cord injury. [Acta Neuropathol. 147 \(1\): 106.](#)
113. Zhao, Z. *et al.* (2020) A novel role of NLRP3-generated IL-1 $\beta$  in the acute-chronic transition of peripheral lipopolysaccharide-elicited neuroinflammation: implications for sepsis-associated neurodegeneration. [J Neuroinflammation. 17 \(1\): 64.](#)
114. Schuhmann, M.K. *et al.* (2020) CD84 Links T Cell and Platelet Activity in Cerebral Thrombo-Inflammation in Acute Stroke. [Circ Res. 127 \(8\): 1023-1035.](#)
115. Flocke, V. *et al.* (2023) Noninvasive assessment of metabolic turnover during inflammation by *in vivo* deuterium magnetic resonance spectroscopy. [Front Immunol. 14: 1258027.](#)

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**Storage**

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.



Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

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<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA711">https://www.bio-rad-antibodies.com/SDS/MCA711</a> 10040
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	<a href="#">DyLight@800</a>
Rabbit Anti Rat IgG (STAR17...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR69...)	<a href="#">FITC</a>
Goat Anti Rat IgG (STAR73...)	<a href="#">RPE</a>
Rabbit Anti Rat IgG (STAR21...)	<a href="#">HRP</a>
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	<a href="#">DyLight@550</a> , <a href="#">DyLight@650</a> , <a href="#">DyLight@800</a>
Goat Anti Rat IgG (STAR131...)	<a href="#">Alk. Phos.</a> , <a href="#">Biotin</a>
Goat Anti Rat IgG (STAR72...)	<a href="#">HRP</a>

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