# Datasheet: MCA275A488

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| **Description:** | MOUSE ANTI RAT CD11b:Alexa Fluor® 488 |
| **Specificity:** | CD11b |
| **Other names:** | INTEGRIN ALPHA M CHAIN, MAC-1 |
| **Format:** | ALEXA FLUOR® 488 |
| **Product Type:** | Monoclonal Antibody |
| **Clone:** | OX-42 |
| **Isotype:** | IgG2a |
| **Quantity:** | 100 TESTS/1ml |

## 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](www.bio-rad-antibodies.com/protocols).

| | Yes | No | Not Determined | Suggested Dilution |
|---|---|---|---|---|
| Flow Cytometry | ▪ | | | Neat - 1/10 |

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.

**Target Species**

Rat

**Product Form**

Purified IgG conjugated to Alexa Fluor® 488 - liquid

**Max Ex/Em**

| Fluorophore | Excitation Max (nm) | Emission Max (nm) |
|---|---|---|
| Alexa Fluor®488 | 495 | 519 |

**Preparation**

Purified IgG prepared by affinity chromatography on protein G from tissue culture supernatant.

**Buffer Solution**

Phosphate buffered saline

**Preservative Stabilisers**

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| 0.09% | Sodium Azide |
| 1% | Bovine Serum Albumin |

**Approx. Protein Concentrations**

IgG concentration 0.05 mg/ml

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| **Immunogen** | Resident rat peritoneal macrophages. |
| **RRID** | AB_324754 |
| **Fusion Partners** | Spleen cells from immunized BALB/c mice were fused with cells of the NSO/U mouse myeloma cell line. |
| **Specificity** | **Mouse anti Rat CD11b, clone OX-42** recognizes rat CD11b, also known as integrin alpha-M, the receptor for the iC3b component of complement. CD11b is a 1151 amino acid single pass type 1 transmembrane glycoprotein posessing a single vWFA domain and multiple FG-GAP repeats. CD11b is expressed on most macrophages, including resident and activated peritoneal macrophages and Kupffer cells and around 35% of alveolar macrophages. The antibody also labels dendritic cells, granulocytes and microglia in the brain (Robinson *et al.*1986).<br><br>Mouse anti Rat CD11b, clone OX-42 is reported to inhibit complement mediated rosettes (Robinson *et al.*1986) as well as inhibit myelin binding and uptake (van der Laan *et al.*1996). |
| **Flow Cytometry** | Use 10ul of the suggested working dilution to label $10^6$ cells in 100ul. |
| **References** | 1. Robinson, A.P. *et al.* (1986) Macrophage heterogeneity in the rat as delineated by two monoclonal antibodies MRC OX-41 and MRC OX-42, the latter recognizing complement receptor type 3. Immunology. 57 (2): 239-47.<br>2. Milligan, C.E. *et al.* (1991) Differential immunochemical markers reveal the normal distribution of brain macrophages and microglia in the developing rat brain. J Comp Neurol. 314 (1): 125-35.<br>3. Yrjanheikki, J. *et al.* (1999) A tetracycline derivative, minocycline, reduces inflammation and protects against focal cerebral ischemia with a wide therapeutic window. Proc Natl Acad Sci U S A. 96: 13496-500.<br>4. Draskovic-Pavlovic, B. *et al.* (1999) Differential effects of anti-rat CD11b monoclonal antibodies on granulocyte adhesiveness. Immunology. 96: 83-9.<br>5. Kielian, T. and Hickey, W.F. (2000) Proinflammatory cytokine, chemokine, and cellular adhesion molecule expression during the acute phase of experimental brain abscess development. Am J Pathol. 157: 647-58.<br>6. Choi, S.H. *et al.* (2003) Thrombin-induced microglial activation produces degeneration of nigral dopaminergic neurons *in vivo*. J Neurosci. 23: 5877-86.<br>7. Bruce-Keller, A.J. *et al.* (2003) Synaptic transport of human immunodeficiency virus-Tat protein causes neurotoxicity and gliosis in rat brain. J Neurosci. 23: 8417-22.<br>8. Jin, S.X. *et al.* (2003) p38 mitogen-activated protein kinase is activated after a spinal nerve ligation in spinal cord microglia and dorsal root ganglion neurons and contributes to the generation of neuropathic pain. J Neurosci. 23: 4017-22.<br>9. Walczak, P. *et al.* (2004) Do hematopoietic cells exposed to a neurogenic environment mimic properties of endogenous neural precursors? J Neurosci Res. 76: 244-54.<br>10. Stidworthy, M.F. *et al.* (2004) Notch1 and Jagged1 are expressed after CNS demyelination, but are not a major rate-determining factor during remyelination. Brain, 127: 1928-41. |

11. Foote, A.K. and Blakemore, W.F. (2005) Inflammation stimulates remyelination in areas of chronic demyelination. Brain. 128: 528-39.
12. Jha, P. *et al.* (2006) The complement system plays a critical role in the development of experimental autoimmune anterior uveitis. Invest Ophthalmol Vis Sci. 47: 1030-8.
13. Clark, A.K. *et al* (2007) Inhibition of spinal microglial cathepsin S for the reversal of neuropathic pain. Proc Natl Acad Sci U S A. 104: 10655-60.
14. Fendrick, S.E. *et al.* (2007) Formation of multinucleated giant cells and microglial degeneration in rats expressing a mutant Cu/Zn superoxide dismutase gene. J Neuroinflammation. 4: 9.
15. Ji, B. *et al.* (2008) Imaging of peripheral benzodiazepine receptor expression as biomarkers of detrimental versus beneficial glial responses in mouse models of Alzheimer's and other CNS pathologies. J Neurosci. 28: 12255-67.
16. Jean, Y.H. *et al.* (2009) Capnellene, a natural marine compound derived from soft coral, attenuates chronic constriction injury-induced neuropathic pain in rats Br J Pharmacol. 158: 713-25.
17. Leonardo, C.C. *et al.* (2009) Inhibition of gelatinase activity reduces neural injury in an *ex vivo* model of hypoxia-ischemia. Neuroscience. 160: 755-66.
18. Jin, Y. *et al.* (2009) Mast cells are early responders after hypoxia-ischemia in immature rat brain. Stroke. 40: 3107-12.
19. Baca Jones, C.C. (2009) Rat cytomegalovirus infection depletes MHC II in bone marrow derived dendritic cells. Virology. 388: 78-90.
20. Schlichter, L.C. *et al.* (2010) The Ca2+ activated SK3 channel is expressed in microglia in the rat striatum and contributes to microglia-mediated neurotoxicity in vitro. J Neuroinflammation. 7: 4.
21. Pickard, M.R. and Chari, D.M. (2010) Robust uptake of magnetic nanoparticles (MNPs) by central nervous system (CNS) microglia: Implications for particle uptake in mixed neural cell populations. Int J Mol Sci. 11: 967-81.
22. Medders, K.E. *et al.* (2010) Activation of p38 MAPK is required in monocytic and neuronal cells for HIV glycoprotein 120-induced neurotoxicity. J Immunol. 185: 4883-95.
23. Li, K. *et al.* (2010) Systemic minocycline differentially influences changes in spinal microglial markers following formalin-induced nociception. J Neuroimmunol. 221: 25-31.
24. Su, D. *et al.* (2010) Lidocaine attenuates proinflammatory cytokine production induced by extracellular adenosine triphosphate in cultured rat microglia. Anesth Analg. 111: 768-74.
25. Jokic, N. *et al.* (2010) The human G93A-SOD1 mutation in a pre-symptomatic rat model of amyotrophic lateral sclerosis increases the vulnerability to a mild spinal cord compression. BMC Genomics. 11: 633.
26. Zhou, D. *et al.* (2010) Involvement of spinal microglial P2X7 receptor in generation of tolerance to morphine analgesia in rats. J Neurosci. 30: 8042-7.
27. Smith, J.S. *et al.* (2010) Role of Early Surgical Decompression of the Intradural Space After Cervical Spinal Cord Injury in an Animal Model J Bone Joint Surg Am. 92: 1206-14.
28. Jiang, Y. *et al.* (2010) Effects of brain-derived neurotrophic factor on local inflammation in experimental stroke of rat. Mediators Inflamm. 2010: 372423.
29. Graber, D.J. *et al.* (2010) Progressive changes in microglia and macrophages in spinal cord and peripheral nerve in the transgenic rat model of amyotrophic lateral sclerosis. J Neuroinflammation. 7: 8.
30. Jeong, H.K. *et al.* (2010) Inflammatory responses are not sufficient to cause delayed

neuronal death in ATP-induced acute brain injury. PLoS One. 5: e13756.
31. Wu, J. *et al.* (2010) Interaction of NG2(+) glial progenitors and microglia/macrophages from the injured spinal cord. Glia. 58: 410-22.
32. Guo, W. *et al.* (2010) Long lasting pain hypersensitivity following ligation of the tendon of the masseter muscle in rats: a model of myogenic orofacial pain. Mol Pain. 6: 40.
33. Shokouhi, B.N. *et al* (2010) Microglial responses around intrinsic CNS neurons are correlated with axonal regeneration. BMC Neurosci. 11: 13.
34. Calvo, M. *et al.* (2010) Neuregulin-ErbB signaling promotes microglial proliferation and chemotaxis contributing to microgliosis and pain after peripheral nerve injury. J Neurosci. 30 (15): 5437-50.
35. Chew, S.S. *et al.* (2011) Response of retinal Connexin43 to optic nerve injury. Invest Ophthalmol Vis Sci. 52: 3620-9.
36. Spencer-Segal, J.L. *et al.* (2011) Distribution of Phosphorylated TrkB Receptor in the Mouse Hippocampal Formation Depends on Sex and Estrous Cycle Stage. J Neurosci. 31: 6780-90.
37. Converse, A.K. *et al.* (2011) 11C-(R)-PK11195 PET imaging of microglial activation and response to minocycline in zymosan-treated rats. J Nucl Med. 52: 257-62.
38. Feng, Y. *et al* (2011) Gene expression profiling of vasoregression in the retina--involvement of microglial cells. PLoS One. 6(2): e16865.
39. Szmydynger-Chodobska, J. *et al.* (2011) Multiple sites of vasopressin synthesis in the injured brain. J Cereb Blood Flow Metab. 31: 47-51.
40. Toda, S. *et al.* (2011) A local anesthetic, ropivacaine, suppresses activated microglia via a nerve growth factor-dependent mechanism and astrocytes via a nerve growth factor-independent mechanism in neuropathic pain. Mol Pain. 7: 2.
41. Xu, Q. *et al.* (2011) Spinal phosphinositide 3-kinase-Akt-mammalian target of rapamycin signaling cascades in inflammation-induced hyperalgesia. J Neurosci. 31: 2113-24.
42. Morales-Garcia, J.A. *et al.* (2011) Phosphodiesterase 7 inhibition preserves dopaminergic neurons in cellular and rodent models of Parkinson disease. PLoS One. 6(2):e17240.
43. Signarovitz, A.L. *et al.* (2012) Mucosal immunization with live attenuated *Francisella novicida* U112ΔiglB protects against pulmonary F. tularensis SCHU S4 in the Fischer 344 rat model. PLoS One. 7: e47639.
44. Ortega, F.J. *et al.* (2012) Glibenclamide enhances neurogenesis and improves long-term functional recovery after transient focal cerebral ischemia. J Cereb Blood Flow Metab. 33: 356-64.
45. Lavisse, S. *et al.* (2012) Reactive astrocytes overexpress TSPO and are detected by TSPO positron emission tomography imaging. J Neurosci. 32: 10809-18.
46. Schonberg, D.L. *et al.* (2012) Ferritin stimulates oligodendrocyte genesis in the adult spinal cord and can be transferred from macrophages to NG2 cells *in vivo*. J Neurosci. 32: 5374-84.
47. d'Avila, J.C. *et al.* (2012) Microglial activation induced by brain trauma is suppressed by post-injury treatment with a PARP inhibitor. J Neuroinflammation. 9: 31.
48. Lovett-Barr, M.R. *et al.* (2012) Repetitive intermittent hypoxia induces respiratory and somatic motor recovery after chronic cervical spinal injury. J Neurosci. 32 (11): 3591-600.
49. Tchoukalova, Y.D. *et al.* (2012) *In vivo* adipogenesis in rats measured by cell kinetics in adipocytes and plastic-adherent stroma-vascular cells in response to high-fat diet and

thiazolidinedione. Diabetes. 61: 137-44.
50. Zhang, Z.J. *et al.* (2012) Chemokine CCL2 and its receptor CCR2 in the medullary dorsal horn are involved in trigeminal neuropathic pain. J Neuroinflammation. 9: 136.
51. Liew, H.K. *et al.* (2012) Systemic administration of urocortin after intracerebral hemorrhage reduces neurological deficits and neuroinflammation in rats. J Neuroinflammation. 9: 13.
52. de Sousa, É *et al.* (2013) Developmental and functional expression of miRNA-stability related genes in the nervous system. PLoS One. 8 (5): e56908.
53. Zhao, H. *et al.* (2013) Brain 3-Mercaptopyruvate Sulfurtransferase (3MST): Cellular Localization and Downregulation after Acute Stroke. PLoS One. 8(6):e67322.
54. Huang, S. *et al.* (2015) Expression of Peroxiredoxin 1 After Traumatic Spinal Cord Injury in Rats. Cell Mol Neurobiol. 35 (8): 1217-26.
55. Hernangómez M *et al.* (2016) CD200R1 agonist attenuates glial activation, inflammatory reactions, and hypersensitivity immediately after its intrathecal application in a rat neuropathic pain model. J Neuroinflammation. 13 (1): 43.
56. Szmydynger-Chodobska, J. *et al.* (2016) The Involvement of Pial Microvessels in Leukocyte Invasion after Mild Traumatic Brain Injury. PLoS One. 11 (12): e0167677.
57. Liu, Z. *et al.* (2016) Leukocyte Infiltration Triggers Seizure Recurrence in a Rat Model of Temporal Lobe Epilepsy. Inflammation. 39 (3): 1090-8.
58. Chen, X. *et al.* (2017) TGF-β1 Neuroprotection via Inhibition of Microglial Activation in a Rat Model of Parkinson's Disease. J Neuroimmune Pharmacol. 12 (3): 433-46.
59. Popiolek-Barczyk, K. *et al.* (2017) Biphalin, a Dimeric Enkephalin, Alleviates LPS-Induced Activation in Rat Primary Microglial Cultures in Opioid Receptor-Dependent and Receptor-Independent Manners. Neural Plast. 2017: 3829472.
60. Huang RY *et al.* (2017) Rapid and Delayed Effects of Pulsed Radiofrequency on Neuropathic Pain: Electrophysiological, Molecular, and Behavioral Evidence Supporting Long-Term Depression. Pain Physician. 20 (2): E269-E283.
61. Chong, S.A. *et al.* (2018) Intrinsic Inflammation Is a Potential Anti-Epileptogenic Target in the Organotypic Hippocampal Slice Model. Neurotherapeutics. 15 (2): 470-88.
62. Terayama, R. *et al.* (2018) $A_3$ adenosine receptor agonist attenuates neuropathic pain by suppressing activation of microglia and convergence of nociceptive inputs in the spinal dorsal horn. Exp Brain Res. 236 (12): 3203-13.
63. Sanches, E.F. *et al.* (2018) Brain Metabolism Alterations Induced by Pregnancy Swimming Decreases Neurological Impairments Following Neonatal Hypoxia-Ischemia in Very Immature Rats. Front Neurol. 9: 480.
64. Collins, J.J.P. *et al.* (2018) Impaired Angiogenic Supportive Capacity and Altered Gene Expression Profile of Resident $CD146^+$ Mesenchymal Stromal Cells Isolated from Hyperoxia-Injured Neonatal Rat Lungs. Stem Cells Dev. 27 (16): 1109-24.
65. Wang, Z.C. *et al.* (2018) Involvement of NF-κB and the CX3CR1 Signaling Network in Mechanical Allodynia Induced by Tetanic Sciatic Stimulation. Neurosci Bull. 34 (1): 64-73.
66. Bourke, G. *et al.* (2018) Effects of early nerve repair on experimental brachial plexus injury in neonatal rats. J Hand Surg Eur Vol. 43 (3): 275-81.
67. Yuan, Z. *et al.* (2019) The anti-inflammatory effect of minocycline on endotoxin-induced uveitis and retinal inflammation in rats. Mol Vis. 25: 359-72.
68. Hansson, E. & Skiöldebrand, E. (2019) Anti-inflammatory effects induced by ultralow concentrations of bupivacaine in combination with ultralow concentrations of sildenafil (Viagra) and vitamin D3 on inflammatory reactive brain astrocytes. PLoS One. 14 (10):

e0223648.
69. Muratori, L. *et al.* (2019) New basic insights on the potential of a chitosan-based medical device for improving functional recovery after radical prostatectomy. BJU Int. 124 (6): 1063-76.
70. Hahm, S.C. *et al.* (2019) Transcutaneous Electrical Nerve Stimulation Reduces Knee Osteoarthritic Pain by Inhibiting Spinal Glial Cells in Rats. Phys Ther. 99 (9): 1211-23.
71. Hellenbrand, D.J. *et al.* (2019) Sustained interleukin-10 delivery reduces inflammation and improves motor function after spinal cord injury. J Neuroinflammation. 16 (1): 93.
72. Sugama, S. *et al.* (2019) Stress-induced microglial activation occurs through β-adrenergic receptor: noradrenaline as a key neurotransmitter in microglial activation. J Neuroinflammation. 16 (1): 266.
73. Anqi, X. *et al.* (2019) Neuroprotective potential of GDF11 in experimental intracerebral hemorrhage in elderly rats. J Clin Neurosci. 63: 182-8.
74. Klemm, P. *et al.* (2019) Hypothermia protects retinal ganglion cells against hypoxia-induced cell death in a retina organ culture model. Clin Exp Ophthalmol. 47 (8): 1043-54.
75. Allendorf, D.H. *et al.* (2020) Activated microglia desialylate their surface, stimulating complement receptor 3-mediated phagocytosis of neurons. Glia. 68 (5): 989-998.
76. Cohrs, G. *et al.* (2020) Expression Patterns of Hypoxia-Inducible Factors, Proinflammatory, and Neuroprotective Cytokines in Neuroepithelial Tissues of Lumbar Spinal Lipomas-A Pilot Study. World Neurosurg. 141: e633-e644.
77. Lin, J. *et al.* (2020) Protective effect of Soluble Epoxide Hydrolase Inhibition in Retinal Vasculopathy associated with Polycystic Kidney Disease. Theranostics. 10 (17): 7857-71.
78. Memedovski, Z. *et al.* (2020) Classical and Alternative Activation of Rat Microglia Treated with Ultrapure *Porphyromonas gingivalis* Lipopolysaccharide *In Vitro*.. Toxins (Basel). 12(5): 333.
79. Espinosa-Garcia, C. *et al.* (2020) Progesterone Attenuates Stress-Induced NLRP3 Inflammasome Activation and Enhances Autophagy following Ischemic Brain Injury. Int J Mol Sci. 21 (11): 3740.
80. Tanaka, J. *et al.* (2020) Generation of CSF1-Independent Ramified Microglia-Like Cells from Leptomeninges *In Vitro*. Cells. 10 (1): 24.
81. van Vliet, E.A. (2020) Long-lasting blood-brain barrier dysfunction and neuroinflammation after traumatic brain injury Neurobiol Dis 11:13.
82. Mecha, M. *et al.* (2020) Involvement of Wnt7a in the role of M2c microglia in neural stem cell oligodendrogenesis. J Neuroinflammation. 17 (1): 88.
83. Chun, S. *et al.* (2021) The Peripheral Role of CCL2 in the Anti-Nociceptive Effect of Sigma-1 Receptor Antagonist BD1047 on Inflammatory Hyperalgesia in Rats. Int J Mol Sci. 22(21):11730.
84. Elabi, O.F. *et al.* (2021) L-dopa-Dependent Effects of GLP-1R Agonists on the Survival of Dopaminergic Cells Transplanted into a Rat Model of Parkinson Disease. Int J Mol Sci. 22(22):12346.
85. Zhang, J. *et al.* (2021) Significant higher-level C-C motif chemokine ligand 2/3 and chemotactic power in cerebral white matter than grey matter in rat and human. Eur J Neurosci. 54 (1): 4088-100.
86. Sato, T. *et al.* (2021) Distribution of alpha-synuclein in the rat cranial sensory ganglia, and oro-cervical regions. Ann Anat. 238: 151776.
87. Winkler, A. *et al.* (2021) Blood-brain barrier resealing in neuromyelitis optica occurs independently of astrocyte regeneration. J Clin Invest. 131(5):e141694.

88. Schnichels, S. *et al.* (2021) Cyclosporine A Protects Retinal Explants against Hypoxia. Int J Mol Sci. 22 (19):10196.
89. Valenzuela, R. *et al.* (2021) An ACE2/Mas-related receptor MrgE axis in dopaminergic neuron mitochondria. Redox Biol. 46: 102078.
90. Giuliano, C. *et al.* (2021) Neuroprotective and Symptomatic Effects of Cannabidiol in an Animal Model of Parkinson's Disease. Int J Mol Sci. 22 (16): 8920.
91. Hosoi, R. *et al.* (2021) Evaluation of intracellular processes in quinolinic acid-induced brain damage by imaging reactive oxygen species generation and mitochondrial complex I activity. EJNMMI Res. 11 (1): 99.
92. Szeredi, I.D. *et al.* (2021) Prior perineural or neonatal treatment with capsaicin does not alter the development of spinal microgliosis induced by peripheral nerve injury. Cell Tissue Res. 383 (2): 677-92.
93. Kuo, T.T. *et al.* (2021) Post-stroke Delivery of Valproic Acid Promotes Functional Recovery and Differentially Modifies Responses of Peri-Infarct Microglia. Front Mol Neurosci. 14: 639145.
94. Joya, A. *et al.* (2021) *In vivo* multimodal imaging of adenosine $A_1$ receptors in neuroinflammation after experimental stroke. Theranostics. 11 (1): 410-25.
95. Lane, E.L. *et al.* (2022) Spontaneous Graft-Induced Dyskinesias Are Independent of 5-HT Neurons and Levodopa Priming in a Model of Parkinson's Disease. Mov Disord. 37 (3): 613-9.
96. Kuter, K.Z. *et al.* (2022) The influence of preconditioning with low dose of LPS on paraquat-induced neurotoxicity, microglia activation and expression of α-synuclein and synphilin-1 in the dopaminergic system. Pharmacol Rep. 74 (1): 67-83.
97. Huang, S. *et al.* (2022) Hydrogen sulfide supplement preserves mitochondrial function of retinal ganglion cell in a rat glaucoma model. Cell Tissue Res. 389 (2): 171-85.
98. Dias, L. *et al.* (2022) $A\beta_{1-42}$ peptides blunt the adenosine $A_{2A}$ receptor-mediated control of the interplay between $P_2X_7$ and $P_2Y_1$ receptors mediated calcium responses in astrocytes. Cell Mol Life Sci. 79 (8): 457.
99. Andrioli, A. *et al.* (2022) Downregulation of the Astroglial Connexin Expression and Neurodegeneration after Pilocarpine-Induced Status Epilepticus. Int J Mol Sci. 24 (1): 23.
100. Li, H. *et al.* (2023) Cellular Localization and Distribution of TGF-β1, GDNF and PDGF-BB in the Adult Primate Central Nervous System. Neurochem Res. 48 (8): 2406-23.
101. Li, Li-H. *et al*. (2023) Ovariectomy induces hyperalgesia accompanied by upregulated estrogen receptor α and protein kinase B in the rat spinal cord Physiol Behav. 271:114342.
102. Telianidis, J. *et al.* (2023) Inhibition of insulin-regulated aminopeptidase confers neuroprotection in a conscious model of ischemic stroke. Sci Rep. 13 (1): 19722.
103. Khayrullina, G. *et al.* (2023) Differential effects of NOX2 and NOX4 inhibition after rodent spinal cord injury. PLoS One. 18 (3): e0281045.
104. Moretti, M. *et al.* (2023) "Combo" Multi-Target Pharmacological Therapy and New Formulations to Reduce Inflammation and Improve Endogenous Remyelination in Traumatic Spinal Cord Injury. Cells. 12 (9): 1331.
105. Ameen, S.S. *et al.* (2023) N-Terminomic Changes in Neurons During Excitotoxicity Reveal Proteolytic Events Associated With Synaptic Dysfunctions and Potential Targets for Neuroprotection. Mol Cell Proteomics. 22 (5): 100543.
106. Sinha, S. *et al.* (2020) Maternal Spirulina supplementation during pregnancy and

lactation partially prevents oxidative stress, glial activation and neuronal damage in protein malnourished F1 progeny. Neurochem Int. 141: 104877.
107. Huang, C.T. *et al.* (2018) Erythropoietin reduces nerve demyelination, neuropathic pain behavior and microglial MAPKs activation through erythropoietin receptors on Schwann cells in a rat model of peripheral neuropathy. Glia. 66 (11): 2299-315.
108. Routhe, L.J. *et al.* (2020) Astrocytic expression of ZIP14 (SLC39A14) is part of the inflammatory reaction in chronic neurodegeneration with iron overload. Glia. 68 (9): 1810-23.
109. Moriyama, M. *et al.* (2018) S-Equol, a Major Isoflavone from Soybean, Inhibits Nitric Oxide Production in Lipopolysaccharide-Stimulated Rat Astrocytes Partially via the GPR30-Mediated Pathway. Int J Inflam. 2018: 8496973.
110. Jeon, M.T. *et al.* (2020) Neurotrophic interactions between neurons and astrocytes following AAV1-Rheb(S16H) transduction in the hippocampus *in vivo*. Br J Pharmacol. 177 (3): 668-686.
111. Li, X. *et al.* (2019) Magnesium sulfate attenuates brain edema by lowering AQP4 expression and inhibits glia-mediated neuroinflammation in a rodent model of eclampsia. Behav Brain Res. 364: 403-12.
112. Li, Q. *et al.* (2019) Spinal IL-36γ/IL-36R participates in the maintenance of chronic inflammatory pain through astroglial JNK pathway. Glia. 67 (3): 438-451.
113. Baror, R. *et al.* (2019) Transforming growth factor-beta renders ageing microglia inhibitory to oligodendrocyte generation by CNS progenitors. Glia. 67 (7): 1374-84.
114. Lane, E.L. *et al.* (2022) Spontaneous Graft-Induced Dyskinesias Are Independent of 5-HT Neurons and Levodopa Priming in a Model of Parkinson's Disease. Mov Disord. 37 (3): 613-9.
115. Ekong, M.B. *et al.* (2024) EVALUATION OF PRENATAL CALABASH CHALK GEOPHAGY ON THE DEVELOPING BRAIN OF WISTAR RATS IBRO Neuroscience Reports. 14 Mar [Epub ahead of print].
116. Demartini, C. *et al.* (2022) Modulation of Glia Activation by TRPA1 Antagonism in Preclinical Models of Migraine. Int J Mol Sci. 23 (22):14085

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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.<br><br>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light. |
| **Guarantee** | 12 months from date of despatch |
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