## Datasheet: MCA74A647T BATCH NUMBER 0713R

Description:	RAT ANTI MOUSE CD11b:Alexa Fluor® 647
Specificity:	CD11b
Other names:	INTEGRIN ALPHA M CHAIN, MAC-1
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	M1/70.15
Isotype:	lgG2b
Quantity:	25 TESTS/0.25ml

## **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 <u>www.bio-rad-antibodies.com/protocols</u> .				
		Yes No	Not Determined	Suggested Dilution	
	Flow Cytometry			Neat - 1/10	
	Where this antibody ha	is not been tested	for use in a particular teo	chnique this does not	
	•	nmended that the	dures. Suggested workin user titrates the antibody e controls.	•	
Target Species	Mouse				
Species Cross	Reacts with: Human, R	labbit			
Reactivity	<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.				
Product Form	Purified IgG conjugated to Alexa Fluor® 647- liquid				
Max Ex/Em	Fluorophore	Excitation Max (nn	n) Emission Max (nm)		
	Alexa Fluor®647	650	665		
Preparation	Purified IgG prepared t supernatant	by affinity chromate	ography on Protein G froi	m tissue culture	

Buffer Solution	Phosphate buffered saline	
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin	
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml	
Immunogen	T cell enriched splenocytes from B10 mice.	
External Database Links	UniProt: <u>P05555</u> <u>Related reagents</u> Entrez Gene: <u>16409</u> Itgam <u>Related reagents</u>	
RRID	AB_1100611	
Fusion Partners	Spleen cells from immunised DA rats were fused with cells of myeloma cell line.	the NS1/1.Ag4.1 mouse
Specificity	Rat anti Mouse CD11b antibody, clone M1/70.15 recognizes surface antigen also known as the alpha M integrin chain or M antigen expressed by granulocytes, monocytes, NK cells and t The expression of CD11b increases during monocyte maturati vary on tissue macrophages. Peritoneal macrophages are repo levels of CD11b than splenic macrophages.	AC-1, a differentiation tissue macrophages. on and expression levels
	Rat anti Mouse CD11b antibody, clone M1/70.15 has been rep to its receptor ( <u>Beller <i>et al.</i> 1982</u> ).	oorted to block iC3b binding
	Rat anti Mouse CD11b antibody, clone M1/70.15 has been rep for use on PLP fixed paraffin embedded tissue but has not bee fixed tissue ( <u>Whiteland <i>et al.</i> 1995</u> ).	v
	This product is routinely tested in flow cytometry on mouse pe	ritoneal macrophages.
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in	100ul.
	The Fc region of monoclonal antibodies may bind non-specific cells expressing low affinity Fc receptors. Non-specific FcR bir using <u>SeroBlock FcR</u> reagent.	•
References	<ol> <li>Beller, D.I. <i>et al.</i> (1982) Anti-Mac-1 selectively inhibits the m complement receptor. <u>J Exp Med. 156 (4): 1000-9.</u></li> <li>Fernández-Suárez, D. (2014) The monoacylglycerol lipase in</li> </ol>	

neuroprotective and alters glial cell phenotype in the chronic MPTP mouse model <u>Neurobiol Aging. 35: 2603-16.</u>

Welt, F.G. *et al.* (2000) Neutrophil, not macrophage, infiltration precedes neointimal thickening in balloon-injured arteries. <u>Arterioscler Thromb Vasc Biol. 20 (12): 2553-8.</u>
 Terrando, N. *et al.* (2010) The impact of IL-1 modulation on the development of

lipopolysaccharide-induced cognitive dysfunction. Crit Care. 14 (3): R88.

5. Redensek, A. *et al.* (2011) Expression and detrimental role of hematopoietic prostaglandin D synthase in spinal cord contusion injury. Glia. 59: 603-14.

6. Brochard, V. *et al* (2009) Infiltration of CD4+ lymphocytes into the brain contributes to neurodegeneration in a mouse model of Parkinson disease. <u>J Clin Invest. 119: 182-92.</u>

7. Chinnery, H.R. *et al.* (2010) Novel characterization of monocyte-derived cell populations in the meninges and choroid plexus and their rates of replenishment in bone marrow chimeric mice. <u>J Neuropathol Exp Neurol. 69: 896-909.</u>

8. Ferger, A.I. *et al* (2010) Effects of mitochondrial dysfunction on the immunological properties of microglia. <u>J Neuroinflammation. 7: 45.</u>

9. Gales, A. *et al* (2010) PPARgamma controls dectin-1 expression required for host antifungal defense against Candida albicans. <u>PLoS Pathog. 6 : e1000714.</u>

10. Geier, H. and Celli, J. (2011) Phagocytic Receptors Dictate Phagosomal Escape and Intracellular Proliferation of Francisella tularensis. <u>Infect Immun. 79: 2204-14.</u>

11. Ghasemlou, N. *et al.* (2010) Mitogen-activated protein kinase-activated protein kinase 2 (MK2) contributes to secondary damage after spinal cord injury. <u>J Neurosci. 30</u>: 13750-9.

12. Huang, Q.Q. *et al* (2008) Role of H2-calponin in regulating macrophage motility and phagocytosis. <u>J Biol Chem. 283: 25887-99.</u>

13. Hudcovic, T. *et al* (2009) Monocolonization with Bacteroides ovatus protects immunodeficient SCID mice from mortality in chronic intestinal inflammation caused by long-lasting dextran sodium sulfate treatment. <u>Physiol Res. 58: 101-10.</u>

14. Kanu, N. *et al.* (2010) The ATM cofactor ATMIN protects against oxidative stress and accumulation of DNA damage in the aging brain. <u>J Biol Chem. 285: 38534-42.</u>

15. Kapturczak, M.H. *et al* (2004) Heme oxygenase-1 modulates early inflammatory responses: evidence from the heme oxygenase-1-deficient mouse. <u>Am J Pathol. 165:</u> <u>1045-53.</u>

16. Kroner, A. *et al* (2010) Ectopic T-cell specificity and absence of perforin and granzyme B alleviate neural damage in oligodendrocyte mutant mice. <u>Am J Pathol. 176: 549-55.</u>

17. L'Episcopo, F. *et al.* (2010) Combining nitric oxide release with anti-inflammatory activity preserves nigrostriatal dopaminergic innervation and prevents motor impairment in a 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine model of Parkinson's disease. J Neuroinflammation. 7: 83.

18. Samanta, J. *et al.* (2010) Noggin protects against ischemic brain injury in rodents. <u>Stroke. 41: 357-62.</u>

19. Yang, X. *et al* (2010) The role of the JAK2-STAT3 pathway in pro-inflammatory responses of EMF-stimulated N9 microglial cells. <u>J Neuroinflammation. 7: 54.</u>

20. Kondo, Y. *et al.* (2011) Macrophages counteract demyelination in a mouse model of globoid cell leukodystrophy. <u>J Neurosci. 31: 3610-24.</u>

21. Macrez, R. *et al.* (2016) Neuroendothelial NMDA receptors as therapeutic targets in experimental autoimmune encephalomyelitis. <u>Brain. Jul 19. pii: aww172. [Epub ahead of print]</u>

22. Amantea, D. *et al.* (2016) Neuroprotective Properties of a Macrolide Antibiotic in a Mouse Model of Middle Cerebral Artery Occlusion: Characterization of the Immunomodulatory Effects and Validation of the Efficacy of Intravenous Administration. Assay Drug Dev Technol. Jul 8. [Epub ahead of print]

23. Werneburg, S. *et al.* (2016) Polysialylation and lipopolysaccharide-induced shedding of E-selectin ligand-1 and neuropilin-2 by microglia and THP-1 macrophages. <u>Glia. 64 (8):</u> <u>1314-30.</u>

24. Certo, M. *et al.* (2015) Activation of RXR/PPARγ underlies neuroprotection by bexarotene in ischemic stroke. <u>Pharmacol Res. 102: 298-307.</u>

25. Chen, Z.Z. *et al.* (2016) Memantine mediates neuroprotection via regulating neurovascular unit in a mouse model of focal cerebral ischemia. <u>Life Sci. 150: 8-14.</u>
26. Rich, M.C. *et al.* (2016) Site-targeted complement inhibition by a complement receptor 2-conjugated inhibitor (mTT30) ameliorates post-injury neuropathology in mouse brains. <u>Neurosci Lett. 617: 188-94.</u>

McCarthy, R.C. *et al.* (2016) Characterization of a novel adult murine immortalized microglial cell line and its activation by amyloid-beta. <u>J Neuroinflammation. 13: 21.</u>
 Jones, R.S. *et al.* (2015) Inhibition of JAK2 attenuates the increase in inflammatory markers in microglia from APP/PS1 mice. <u>Neurobiol Aging. 36 (10): 2716-24.</u>
 Amantea, D. *et al.* (2016) Azithromycin protects mice against ischemic stroke injury by promoting macrophage transition towards M2 phenotype. <u>Exp Neurol. 275 Pt 1: 116-25.</u>
 Bains, M. & Roberts, J.L. (2016) Estrogen protects against dopamine neuron toxicity in primary mesencephalic cultures through an indirect P13K/Akt mediated astrocyte

pathway. Neurosci Lett. 610: 79-85.

31. Ji, J. *et al.* (2015) Iptakalim protects against ischemic injury by improving neurovascular unit function in the mouse brain. <u>Clin Exp Pharmacol Physiol. 42 (7):</u> <u>766-71.</u>

32. Kim, B.W. *et al.* (2015)  $\alpha$ -Asarone attenuates microglia-mediated neuroinflammation by inhibiting NF kappa B activation and mitigates MPTP-induced behavioral deficits in a mouse model of Parkinson's disease. <u>Neuropharmacology</u>. 97: 46-57.

33. Nishikawa, K. *et al.* (2015) Resveratrol increases CD68<sup>+</sup> Kupffer cells colocalized with adipose differentiation-related protein and ameliorates high-fat-diet-induced fatty liver in mice. <u>Mol Nutr Food Res. 59 (6): 1155-70.</u>

34. Jiang, H. *et al.* (2017) Dense Intra-adipose Sympathetic Arborizations Are Essential for Cold-Induced Beiging of Mouse White Adipose Tissue. <u>Cell Metab. 26 (4): 686-692.e3.</u>
35. Zhang, J.C. *et al.* (2017) Prophylactic effects of sulforaphane on depression-like

behavior and dendritic changes in mice after inflammation. <u>J Nutr Biochem. 39: 134-44.</u> 36. Petković, F. *et al.* (2017) Reduced cuprizone-induced cerebellar demyelination in mice with astrocyte-targeted production of IL-6 is associated with chronically activated, but less responsive microglia. <u>J Neuroimmunol. 310: 97-102.</u>

37. Olesen, M. N. *et al.* (2018) CD4 T cells react to local increase of  $\alpha$ -synuclein in a pathology-associated variant-dependent manner and modify brain microglia in absence of brain pathology <u>Heliyon. 4 (1): e00513</u>.

38. Shin, D. *et al.* (2018) Bee Venom Phospholipase A2 Alleviate House Dust Mite-Induced Atopic Dermatitis-Like Skin Lesions by the CD206 Mannose Receptor. <u>Toxins (Basel). 10 (4)Apr 02 [Epub ahead of print].</u>

39. Price, B.R. *et al.* (2020) Therapeutic Trem2 activation ameliorates amyloid-beta deposition and improves cognition in the 5XFAD model of amyloid deposition.  $\underline{J}$ 

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