Datasheet: MCA2293

BATCH NUMBER 1701

Description:	RAT ANTI MOUSE CD107b
Specificity:	CD107b
Other names:	MAC-3
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	M3/84
Isotype:	IgG1
Quantity:	0.25 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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry (1)	▪			1/50 - 1/100
Immunohistology - Frozen	▪			
Immunohistology - Paraffin	▪			
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting	▪			

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.

(1)**Membrane permeabilisation is required for this application. Bio-Rad recommends the use of Leucoperm™ (Product Code BUF09) for this purpose.**

Target Species	Mouse
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline

Preservative Stabilisers	0.09% Sodium Azide
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Glycoproteins purified from mouse peritoneal macrophage membranes.
External Database Links	**UniProt:** P17047 Related reagents **Entrez Gene:** 16784 Lamp2 Related reagents
Synonyms	Lamp-2
RRID	AB_2249788
Fusion Partners	Spleen cells from immunised Lewis rats were fused with cells of the mouse P3-NSI/1-Ag4-1 myeloma cell line.
Specificity	**Rat anti Mouse CD107b antibody, clone M3/84** recognizes murine CD107b, also known as MAC-3 and LAMP-2. CD107b is a transmembrane glycoprotein that is associated with lysosomal membranes and is primarily expressed on mononuclear phagocytes. Expression of CD107b does vary between cell populations and the molecular weight of CD107b can vary between ~92-120 kDa. CD107b is involved in aspects of leucocyte adhesion (Kannan *et al.* 1996). The expression of CD107b is predominantly cytoplasmic - flow cytometry results are improved by the use of a membrane permeabilisation procedure prior to staining.
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10^6 cells in 100ul.
References	1. Springer, T.A. (1981) Monoclonal antibody analysis of complex biological systems. Combination of cell hybridization and immunoadsorbents in a novel cascade procedure and its application to the macrophage cell surface. J Biol Chem. 256 (8): 3833-9. 2. Flotte, T.J. *et al.* (1983) Dendritic cell and macrophage staining by monoclonal antibodies in tissue sections and epidermal sheets. Am J Pathol. 111 (1): 112-24. 3. Ho, M.K. & Springer, T.A. (1983) Tissue distribution, structural characterization, and biosynthesis of Mac-3, a macrophage surface glycoprotein exhibiting molecular weight heterogeneity. J Biol Chem. 258 (1): 636-42. 4. Ulrich, R. *et al.* (2010) Machine learning approach identifies new pathways associated with demyelination in a viral model of multiple sclerosis. J Cell Mol Med. 14 (1-2): 434-48. 5. Amirbekian, V. *et al.* (2007) Detecting and assessing macrophages in vivo to evaluate atherosclerosis noninvasively using molecular MRI. Proc Natl Acad Sci U S A. 104: 961-6. 6. Fan, D. *et al.* (2014) Differential role of TIMP2 and TIMP3 in cardiac hypertrophy,

fibrosis, and diastolic dysfunction. Cardiovasc Res. 103 (2): 268-80.
7. Higuchi, Y. *et al.* (2012) Upregulation of anticoagulant proteins, protein S and tissue factor pathway inhibitor, in the mouse myocardium with cardio-specific TNF-α overexpression. Am J Physiol Heart Circ Physiol. 302: H2352-62.
8. Ishibashi, M. *et al.* (2004) Critical role of monocyte chemoattractant protein-1 receptor CCR2 on monocytes in hypertension-induced vascular inflammation and remodeling. Circ Res. 94: 1203-10.
9. Sato, A. *et al.* (2008) Thioredoxin-1 ameliorates cigarette smoke-induced lung inflammation and emphysema in mice. J Pharmacol Exp Ther. 325: 380-8.
10. Xu, J. *et al.* (2007) Role of cardiac overexpression of ANG II in the regulation of cardiac function and remodeling postmyocardial infarction. Am J Physiol Heart Circ Physiol. 293: H1900-7.
11. Zhao, Q. *et al.* (2004) Essential role of vascular endothelial growth factor in angiotensin II-induced vascular inflammation and remodeling. Hypertension. 44: 264-70.
12. Hansmann, F. *et al.* (2012) Highly malignant behavior of a murine oligodendrocyte precursor cell line following transplantation into the demyelinated and nondemyelinated central nervous system. Cell Transplant. 21 (6): 1161-75.
13. Herder, V. *et al.* (2015) Dynamic Changes of Microglia/Macrophage M1 and M2 Polarization in Theiler's Murine Encephalomyelitis. Brain Pathol. 25 (6): 712-23.
14. Bröer S *et al.* (2016) Brain inflammation, neurodegeneration and seizure development following picornavirus infection markedly differ among virus and mouse strains and substrains. Exp Neurol. pii: S0014-4886(16)30033-4.
15. Bobbala, D. *et al.* (2016) Interleukin-21-dependent modulation of T cell antigen receptor reactivity towards low affinity peptide ligands in autoreactive CD8(+) T lymphocytes. Cytokine. 85: 83-91.
16. Raddatz, B.B. *et al.* (2016) Central Nervous System Demyelination and Remyelination is Independent from Systemic Cholesterol Level in Theiler's Murine Encephalomyelitis. Brain Pathol. 26 (1): 102-19.
17. Ciurkiewicz, M. *et al.* (2018) Cytotoxic $CD8^+$ T cell ablation enhances the capacity of regulatory T cells to delay viral elimination in Theiler's murine encephalomyelitis. Brain Pathol. 28 (3): 349-368.
18. Fayyad, A. *et al.* (2018) Matrix metalloproteinases expression in spontaneous canine histiocytic sarcomas and its xenograft model. Vet Immunol Immunopathol. 198: 54-64.
19. Li, L. *et al.* (2015) Interferon-stimulated genes-essential antiviral effectors implicated in resistance to Theiler's virus-induced demyelinating disease. J Neuroinflammation. 12: 242.
20. Hansmann, F. *et al.* (2018) Beneficial and detrimental impact of transplanted canine adipose-derived stem cells in a virus-induced demyelinating mouse model. Vet Immunol Immunopathol. 202: 130-40.
21. Armando, F. *et al.* (2021) Intratumoral Canine Distemper Virus Infection Inhibits Tumor Growth by Modulation of the Tumor Microenvironment in a Murine Xenograft Model of Canine Histiocytic Sarcoma. Int J Mol Sci. 22 (7)Mar 30 [Epub ahead of print].

Storage

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing

	as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA2293 10040
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®550, DyLight®650, DyLight®800
Goat Anti Rat IgG (STAR131...)	Alk. Phos., Biotin

Recommended Useful Reagents

ANTIGEN RETRIEVAL BUFFER, pH8.0 (BUF025A)

North & South America Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com

Worldwide Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com

Europe Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

'M366568:200529'

Printed on 23 May 2024