Datasheet: MCA2392

Description:	RAT ANTI MOUSE CD301
Specificity:	CD301
Other names:	MACROPHAGE GALACTOSE SPECIFIC LECTIN
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	ER-MP23
Isotype:	IgG2a
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	▪			1/100 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin (1)	▪			
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.

(1)**Heat mediated antigen retrieval is required prior to staining paraffin-embedded sections with this antibody. Bio-Rad recommend citrate buffer, pH6.0, 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	Balb/c macrophage precursor cell hybrids.
Fusion Partners	Cells from immunised rats were fused with cells of the rat Y3-Ag1.2.3 myeloma cell line.
Specificity	**Rat anti Mouse CD301 antibody, clone ER-MP23** recognizes murine CD301, a ~38 kDa cell surface protein, otherwise known as macrophage galactose N-acetylgalactosamine lectin (MGL) or dendritic cell asialoglycoprotein (DC-ASGPR). In mice, CD301 is predominantly expressed on mature macrophages found associated with a wide range of connective tissues including macrophages in the dermis and the pancreas. Clone ER-MP23 also detects a population of dendritic cells in lymphoid tissue, which are probably recent immigrants from peripheral connective tissue sites. Expression of CD301 is induced by alternative (i.e. IL-4/IL-13 mediated) activation of macrophages and dendritic cells, but not all CD301 positive cells are necessarily IL-4/IL-13 stimulated. Rat anti Mouse CD301 antibody, clone ER-MP23 is reported to block the function of mouse CD301 (Dupasquier *et al.* 2006). Rat anti Mouse CD301 antibody, clone ER-MP23 binds both MGL1 and MGL2 homologues.
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
References	1. Leenen, P.J *et al.* (1994) Markers of mouse macrophage development detected by monoclonal antibodies. J Immunol Methods. 174 (1-2): 5-19. 2. Geutskens, S.B. *et al.* (2005) Macrophages in the murine pancreas and their involvement in fetal endocrine development *in vitro*. J Leukoc Biol. 78 (4): 845-52. 3. Abadie, V. *et al.* (2005) Neutrophils rapidly migrate via lymphatics after *Mycobacterium bovis* BCG intradermal vaccination and shuttle live bacilli to the draining lymph nodes. Blood. 106: 1843-50. 4. Dupasquier, M. *et al.* (2004) Macrophages and dendritic cells constitute a major subpopulation of cells in the mouse dermis. J Invest Dermatol. 123: 876-9. 5. Sindrilaru, A. *et al.* (2011) An unrestrained proinflammatory M1 macrophage population induced by iron impairs wound healing in humans and mice. J Clin Invest. 121: 985-97. 6. Westcott, D.J. *et al.* (2009) MGL1 promotes adipose tissue inflammation and insulin resistance by regulating 7/4hi monocytes in obesity. J Exp Med. 206: 3143-56. 7. Fischer-Posovszky, P. *et al.* (2011) Targeted deletion of adipocytes by apoptosis leads to adipose tissue recruitment of alternatively activated m2 macrophages. Endocrinology. 152: 3074-81. 8. Spite, M. *et al.* (2011) Deficiency of the Leukotriene B4 Receptor, BLT-1, Protects against Systemic Insulin Resistance in Diet-Induced Obesity. J Immunol. 187: 1942-9. 9. Raes, G. *et al.* (2005) Macrophage galactose-type C-type lectins as novel markers for alternatively activated macrophages elicited by parasitic infections and allergic airway inflammation. J Leukoc Biol. 77: 321-7. 10. Freire, T. *et al.* (2010) Glycosidic Tn-based vaccines targeting dermal dendritic cells favor germinal center B-cell development and potent antibody response in the absence of adjuvant. Blood. 116: 3526-36. 11. Lumeng, C.N. *et al.* (2008) Phenotypic switching of adipose tissue macrophages with obesity is generated by spatiotemporal differences in macrophage subtypes. Diabetes. 57: 3239-46. 12. Blyszczuk, P. *et al.* (2013) Nitric oxide synthase 2 is required for conversion of pro-fibrogenic inflammatory CD133(+) progenitors into F4/80(+) macrophages in experimental autoimmune myocarditis. Cardiovasc Res. 97 (2): 219-29. 13. Dib, L.H. *et al.* (2014) Bone marrow leptin signaling mediates obesity-associated adipose tissue inflammation in male mice. Endocrinology. 155: 40-6. 14. Ferret-Bernard, S. *et al.* (2012) Plasma membrane proteomes of differentially matured dendritic cells identified by LC-MS/MS combined with iTRAQ labelling. J. Proteomics. 75: 938-48.

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Storage	Store at +4^{o}C or at -20^{o}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.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	DyLight®800

Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®649, DyLight®800
Goat Anti Rat IgG (STAR131...)	Alk. Phos., Biotin
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP

Recommended Negative Controls

RAT IgG2a NEGATIVE CONTROL (MCA1212)

Recommended Useful Reagents

ANTIGEN RETRIEVAL BUFFER, pH8.0 (BUF025A)
ANTIGEN RETRIEVAL BUFFER, pH8.0 (BUF025C)

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