

# Datasheet: MCA2392 BATCH NUMBER 148197

| Description:  | RAT ANTI MOUSE CD301                 |
|---------------|--------------------------------------|
| Specificity:  | CD301                                |
| Other names:  | MACROPHAGE GALACTOSE SPECIFIC LECTIN |
| Format:       | Purified                             |
| Product Type: | Monoclonal Antibody                  |
| Clone:        | ER-MP23                              |
| Isotype:      | lgG2a                                |
| 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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

|                                | Yes | No | <b>Not Determined</b> | 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<br>Stabilisers       | 0.09% Sodium Azide  |
| Carrier Free                      | Yes   |
| Approx. Protein<br>Concentrations | IgG concentration 1.0 mg/ml   |
| Immunogen                         | Balb/c macrophage precursor cell hybrids.   |
| RRID                              | AB_872014   |
| 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 ( <u>Dupasquier et al. 2006</u> ). 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 <sup>6</sup> cells in 100ul.   |
| References                        | <ol> <li>Leenen, P.J et al. (1994) Markers of mouse macrophage development detected by monoclonal antibodies. J Immunol Methods. 174 (1-2): 5-19.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>Fischer-Posovszky, P. et al. (2011) Targeted deletion of adipocytes by apoptosis leads</li> </ol> |

to adipose tissue recruitment of alternatively activated m2 macrophages. Endocrinology.

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- 16. Wagner, M. *et al.* (2012) Inflamed tumor-associated adipose tissue is a depot for macrophages that stimulate tumor growth and angiogenesis. Angiogenesis. 15: 481-95
- 17. Shah, R. *et al.* (2015) Metabolic Effects of CX3CR1 Deficiency in Diet-Induced Obese Mice. PLoS One. 10 (9): e0138317.
- 18. Morris, M.E. *et al.* (2015) Systemically Delivered Adipose Stromal Vascular Fraction Cells Disseminate to Peripheral Artery Walls and Reduce Vasomotor Tone Through a CD11b+ Cell-Dependent Mechanism. Stem Cells Transl Med. pii: sctm.2014-0252.
- 19. Vukman KV *et al.* (2013) Mannose receptor and macrophage galactose-type lectin are involved in *Bordetella pertussis* mast cell interaction. J Leukoc Biol. 94 (3): 439-48.
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Inflammation in Obesity. Diabetes. 65 (8): 2268-81.

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#### **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.

| Guarantee                        | 12 months from date of despatch  |
|----------------------------------|--|
| Health And Safety<br>Information | Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2392">https://www.bio-rad-antibodies.com/SDS/MCA2392</a> 10040 |
| Regulatory                       | For research purposes only   |

# Related Products

## **Recommended Secondary Antibodies**

Rabbit Anti Rat IgG (STAR16...) <u>DyLight®800</u>

Rabbit Anti Rat IgG (STAR17...)

Goat Anti Rat IgG (STAR69...)

Goat Anti Rat IgG (STAR73...)

Rabbit Anti Rat IgG (STAR21...)

HRP

Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...) <u>DyLight®550</u>, <u>DyLight®650</u>, <u>DyLight®800</u>

Goat Anti Rat IgG (STAR131...) Alk. Phos., Biotin

Goat Anti Rat IgG (STAR72...) HRP

# **Recommended Negative Controls**

RAT IgG2a NEGATIVE CONTROL (MCA1212)

## **Recommended Useful Reagents**

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

 North & South
 Tel: +1 800 265 7376
 Worldwide
 Tel: +44 (0)1865 852 700
 Europe
 Tel: +49 (0) 89 8090 95 21

 America
 Fax: +1 919 878 3751
 Fax: +44 (0)1865 852 739
 Fax: +49 (0) 89 8090 95 50

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M366798:200529'

## Printed on 09 Aug 2024

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