

Datasheet: MCA2391T

BATCH NUMBER 165557

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| Description: | RAT ANTI MOUSE ER-MP58 |
| Specificity: | ER-MP58 |
| Other names: | MYELOID PRECURSOR ANTIGEN |
| Format: | Purified |
| Product Type: | Monoclonal Antibody |
| Clone: | ER-MP58 |
| Isotype: | IgG2a |
| Quantity: | 25 µg |

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 | ▪ | | | |
| Immunohistology - Frozen | ▪ | | | 1/25 - 1/100 |
| Immunohistology - Paraffin | | | ▪ | |
| ELISA | | | ▪ | |
| Immunoprecipitation | ▪ | | | |
| Western Blotting | | | ▪ | |

Where this product 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 product for use in their own system using appropriate negative/positive controls.

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| 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 (NaN ₃) |

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| Carrier Free | Yes |
| Approx. Protein Concentrations | IgG concentration 1.0 mg/ml |
| Immunogen | Balb/c macrophage precursor cell hybrids |
| RRID | AB_2095211 |
| Fusion Partners | Cells from immunized rats were fused with cells of the Y3-Ag1.2.3 myeloma cell line. |
| Specificity | <p>Rat anti Mouse ER-MP58 antibody, clone ER-MP58 recognizes the murine antigen ER-MP58, which is expressed by all bone marrow-derived M-CSF- and GM-CSF-responsive myeloid blood cell precursors.</p> <p>The expression of ER-MP58 remains at a high level throughout the precursor/monocyte stage and is down-regulated upon maturation into mature macrophages. The ER-MP58 antigen is used to distinguish between early myeloid-committed cells, haematopoietic progenitors cells and as a marker for macrophage development in bone marrow. ER-MP58 is suitable for the identification of myeloid haemopoietic islands in various organs, and for embryonic tissues.</p> |
| Flow Cytometry | Use 10µl of the suggested working dilution to label 10 ⁶ cells in 100µl |
| References | <ol style="list-style-type: none"> 1. Leenen, P.J. <i>et al.</i> (1990) Murine macrophage precursor characterization. II. Monoclonal antibodies against macrophage precursor antigens. Eur J Immunol. 20 (1): 27-34. 2. Henkel, G.W. <i>et al.</i> (1999) Commitment to the monocytic lineage occurs in the absence of the transcription factor PU.1. Blood. 93 (9): 2849-58. 3. Nikolic, T. <i>et al.</i> (2003) Developmental stages of myeloid dendritic cells in mouse bone marrow. Int Immunol. 15 (4): 515-24. 4. Geutskens, S.B. <i>et al.</i> (2005) Macrophages in the murine pancreas and their involvement in fetal endocrine development <i>in vitro</i>. J Leukoc Biol. 78 (4): 845-52. 5. Sunderkötter, C. <i>et al.</i> (2004) Subpopulations of mouse blood monocytes differ in maturation stage and inflammatory response. J Immunol. 172: 4410-7. 6. Chan, J. <i>et al.</i>, (1998) Macrophage lineage cells in inflammation: characterization by colony-stimulating factor-1 (CSF-1) receptor (c-Fms), ER-MP58, and ER-MP20 (Ly-6C) expression. Blood. 1998 Aug 92: 1423-31. 7. Oomen, S.P. <i>et al.</i> (2002) Somatostatin is a selective chemoattractant for primitive (CD34(+)) hematopoietic progenitor cells. Exp Hematol. 30: 116-25. 8. Wynn, A.A. <i>et al.</i> (2001) Role of granulocyte/macrophage colony-stimulating factor in zymocel-induced hepatic granuloma formation. Am J Pathol. 158: 131-45. 9. Rössner, S. <i>et al.</i> (2005) Myeloid dendritic cell precursors generated from bone marrow suppress T cell responses via cell contact and nitric oxide production <i>in vitro</i>. Eur J Immunol. 35: 3533-44. 10. Goossens, P. <i>et al.</i> (2011) Myeloid IκBα deficiency promotes atherogenesis by enhancing leukocyte recruitment to the plaques. PLoS One. 6: e22327. 11. Iwasaki, Y. <i>et al.</i> (2011) <i>In situ</i> proliferation and differentiation of macrophages in dental pulp. Cell Tissue Res. 346: 99-109. |

12. Hoeksema, M.A. *et al.* (2014) Targeting macrophage Histone deacetylase 3 stabilizes atherosclerotic lesions. [EMBO Mol Med. pii: e201404170.](#)
13. Oliveira, M.A. *et al.* (2003) Immature macrophages derived from mouse bone marrow produce large amounts of IL-12p40 after LPS stimulation. [J Leukoc Biol. 74: 857-67.](#)
14. de Bruijn, M.F. *et al.* (1996) High-level expression of the ER-MP58 antigen on mouse bone marrow hematopoietic progenitor cells marks commitment to the myeloid lineage. [Eur J Immunol. 26: 2850-8.](#)
15. Welzen-Coppens, J.M. *et al.* (2012) Abnormalities of dendritic cell precursors in the pancreas of the NOD mouse model of diabetes. [Eur J Immunol. 42: 186-94.](#)
16. Neele, A.E. *et al.* (2018) Myeloid Kdm6b deficiency results in advanced atherosclerosis. [Atherosclerosis. 275: 156-165.](#)
17. Luque-Martin, R. *et al.* (2019) Targeting Histone Deacetylases in Myeloid Cells Inhibits Their Maturation and Inflammatory Function With Limited Effects on Atherosclerosis. [Front Pharmacol. 10: 1242.](#)

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| Storage | Store at +4°C. DO NOT FREEZE. This product should be stored undiluted. 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/MCA2391T 10040 |
| Regulatory | For research purposes only |

Related Products

Recommended Secondary Antibodies

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

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL \(MCA1212\)](#)

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| 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 |
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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)

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