Mouse MARCO
Alexa Fluor® 405-conjugated Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2359A
Catalog Number: FAB29561V
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse MARCO in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2359A
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line, NS0-derived mouse MARCO protein Gln70-Ser518 Accession # Q60754
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	J774 mouse monocyte-macrophage cell line treated with LPS

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** • 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

MARCO (macrophage receptor with collagenous structure), also known as SCARA2, is an 80 kDa type II transmembrane glycoprotein that belongs to the class A scavenger receptor family (1). Mouse MARCO consists of a 48 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 449 aa extracellular domain (ECD) that includes a stalk region, a collagen-like region, and one SRCR domain (2). Within the ECD, mouse MARCO shares 69% and 86% aa sequence identity with human and rat MARCO, respectively. It shares 18%-28% aa sequence identity with other mouse class A scavenger receptors CL-P1, SCARA3, SCARA5, and SR-A1/MSR. MARCO is constitutively expressed on the surface of splenic and lymph node macrophages (2, 3). Its expression is induced on Kupffer cells and alveolar macrophages by microbial infection, chemical irritants, and Th1 polarizing factors (3-5). MARCO binds LPS, lipoteichoic acid, and other determinants on Gram positive and Gram negative bacteria (2, 6-8). It also binds modified LDL, CpG oligonucleotides, UGRP1, silica, and TiO_2 (2, 9-11). MARCO is required for the organization of the splenic marginal zone and the interaction of local macrophages and B cells (12, 13). The SRCR domain mediates binding of MARCO to its various ligands (3, 12), while the collagen-like region mediates assembly into a disulfide-linked trimeric molecule (2, 7). MARCO ligation induces, but is not required for the production of IL-12, NO, or TNF-α by macrophages (5, 6, 9). MARCO knockout mice show a reduced clearance of bacterial infections, reduced mast cell mediated silicosis, increased pulmonary inflammation, and increased sensitivity to ozone induced lung damage (4, 9, 14-16).

References:

1. Murphy, J.E. *et al.* (2005) Atherosclerosis **182**:1.
2. Elomaa, O. *et al.* (1995) Cell **80**:603.
3. Van der Laan, L.J.W. *et al.* (1999) J. Immunol. **162**:939.
4. Dahl, M. *et al.* (2007) J. Clin. Invest. **117**:757.
5. Jozefowski, S. *et al.* (2005) J. Immunol. **175**:8032.
6. Mukhopadhyay, S. *et al.* (2006) Eur. J. Immunol. **36**:940.
7. Sankala, M. *et al.* (2002) J. Biol. Chem. **277**:33378.
8. Chen, Y. *et al.* (2006) J. Biol. Chem. **281**:12767.
9. Jozefowski, S. *et al.* (2006) J. Leukoc. Biol. **80**:870.
10. Bin, L.-H. *et al.* (2003) J. Immunol. **171**:924.
11. Hamilton, Jr. R.F. *et al.* (2006) J. Biol. Chem. **281**:34218.
12. Karlsson, M.C.I. *et al.* (2003) J. Exp. Med. **198**:333.
13. Chen, Y. *et al.* (2005) J. Immunol. **175**:8173.
14. Arredouani, M. *et al.* (2004) J. Exp. Med. **200**:267.
15. Arredouani, M.S. *et al.* (2007) J. Immunol. **178**:5912.
16. Brown, J.M. *et al.* (2007) Am. J. Respir. Cell Mol. Biol. **36**:43.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Mouse MARCO
Alexa Fluor® 405-conjugated Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2359A
Catalog Number: FAB29561V
100 µg

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449