Mouse MARCO Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2359A
Catalog Number: MAB29561

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
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

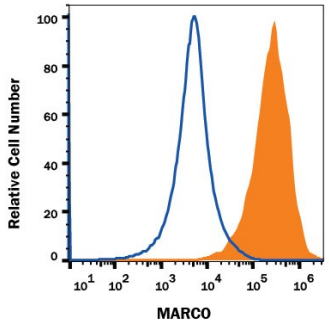
APPLICATIONS

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 µg/10^6 cells	J774 mouse monocyte-macrophage cell line treated with LPS
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Flow Cytometry



Detection of MARCO in J774 Mouse Cell Line by Flow Cytometry. J774 mouse monocyte-macrophage cell line, resting (open histogram), or treated with 500 ng/ml LPS for 3 days (filled histogram) were stained with Rabbit Anti-Mouse MARCO Monoclonal Antibody (Catalog # MAB29561) followed by anti-Rabbit IgG APC-conjugated secondary antibody (Catalog # F0111). Staining was performed using our Staining Membrane-associated Proteins protocol.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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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:

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