

MARCO (IBL-12): sc-65353

BACKGROUND

Macrophages provide their host with a nonspecific immune defense against pathogens. One cellular surface receptor utilized by macrophages is the macrophage receptor with collagenous structure (MARCO). MARCO is a member of the class A scavenger receptor molecules. This single-pass type II membrane protein was first identified in subpopulations of murine macrophages in the spleen and medullary cord of lymph nodes. MARCO is additionally found in increased levels in other tissues during bacterial infection. MARCO is a major receptor in alveolar macrophages, binding both Gram-positive and Gram-negative bacteria. Additionally, MARCO has been shown to be the major scavenger receptor involved in silica uptake and cytotoxicity in murine macrophages. In mice, mutations in the gene coding for MARCO may lead to increased pulmonary inflammation and cytokine release as well as an impaired ability to clear bacteria from the lungs.

REFERENCES

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- Arredouani, M.S., et al. 2005. MARCO is the major binding receptor for unopsonized particles and bacteria on human alveolar macrophages. *J. Immunol.* 175: 6058-6064.
- Jozefowski, S., et al. 2005. Disparate regulation and function of the class A scavenger receptors SR-A/II and MARCO. *J. Immunol.* 175: 8032-8041.
- Chen, Y., et al. 2005. Defective microarchitecture of the spleen marginal zone and impaired response to a thymus-independent type 2 antigen in mice lacking scavenger receptors MARCO and SR-A. *J. Immunol.* 175: 8173-8180.
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- Kvell, K., et al. 2006. Species-specific restriction of cell surface expression of mouse MARCO glycoprotein in murine cell lines. *Biochem. Biophys. Res. Commun.* 341: 1193-1202.
- Jozefowski, S., et al. 2006. Role of scavenger receptor MARCO in macrophage responses to CpG oligodeoxynucleotides. *J. Leukoc. Biol.* 80: 870-879.
- Hamilton, R.F., Jr., et al. 2006. MARCO mediates silica uptake and toxicity in alveolar macrophages from C57BL/6 mice. *J. Biol. Chem.* 281: 34218-34226.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: Marco (mouse) mapping to 1 E2.3.

SOURCE

MARCO (IBL-12) is a rat monoclonal antibody raised against macrophage receptor with collagenous structure of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MARCO (IBL-12) is recommended for detection of MARCO of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for MARCO siRNA (m): sc-75748, MARCO shRNA Plasmid (m): sc-75748-SH and MARCO shRNA (m) Lentiviral Particles: sc-75748-V.

Molecular Weight of MARCO: 53 kDa.

SELECT PRODUCT CITATIONS

- Zhang, Q., et al. 2019. Predominant role of immunoglobulin G in the pathogenesis of splenomegaly in murine lupus. *Front. Immunol.* 10: 3020.
- Franchina, D.G., et al. 2022. Glutathione-dependent redox balance characterizes the distinct metabolic properties of follicular and marginal zone B cells. *Nat. Commun.* 13: 1789.

RESEARCH USE

For research use only, not for use in diagnostic procedures.