

MARCO (F-3): sc-398053



The Power to Question

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

1. Grolleau, A., et al. 2003. Inducible expression of macrophage receptor MARCO by dendritic cells following phagocytic uptake of dead cells uncovered by oligonucleotide arrays. *J. Immunol.* 171: 2879-2888.
2. Arredouani, M., et al. 2004. The scavenger receptor MARCO is required for lung defense against pneumococcal pneumonia and inhaled particles. *J. Exp. Med.* 200: 267-272.
3. 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.
4. Jozefowski, S., et al. 2005. Disparate regulation and function of the class A scavenger receptors SR-AI/II and MARCO. *J. Immunol.* 175: 8032-8041.
5. 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.

CHROMOSOMAL LOCATION

Genetic locus: MARCO (human) mapping to 2q14.2.

SOURCE

MARCO (F-3) is a mouse monoclonal antibody raised against amino acids 198-247 mapping within an extracellular domain of MARCO of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MARCO (F-3) is available conjugated to agarose (sc-398053 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398053 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398053 PE), fluorescein (sc-398053 FITC), Alexa Fluor® 488 (sc-398053 AF488), Alexa Fluor® 546 (sc-398053 AF546), Alexa Fluor® 594 (sc-398053 AF594) or Alexa Fluor® 647 (sc-398053 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398053 AF680) or Alexa Fluor® 790 (sc-398053 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MARCO (F-3) is recommended for detection of MARCO of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MARCO siRNA (h): sc-75747, MARCO shRNA Plasmid (h): sc-75747-SH and MARCO shRNA (h) Lentiviral Particles: sc-75747-V.

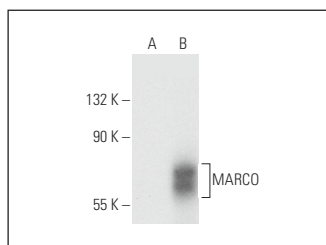
Molecular Weight of MARCO: 53 kDa.

Positive Controls: MARCO (h): 293T Lysate: sc-159726.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MARCO (F-3): sc-398053. Western blot analysis of MARCO expression in non-transfected: sc-117752 (A) and human MARCO transfected: sc-159726 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tiwari-Heckler, S., et al. 2021. Adenosine deaminase 2 produced by infiltrative monocytes promotes liver fibrosis in nonalcoholic fatty liver disease. *Cell Rep.* 37: 109897.

STORAGE

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

RESEARCH USE

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

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