

MR1 (H-63): sc-292077

BACKGROUND

MR1 (major histocompatibility complex, class I-related), also known as HLALS, is a 341 amino acid single-pass membrane protein that localizes to the endoplasmic reticulum, as well as to the extracellular side of the cell membrane, and contains one Ig-like C1-type domain. Expressed ubiquitously, MR1 exists as a heterodimer with β -2-Microglobulin and plays an important role in antigen presentation, specifically in the development and expansion of mucosal-associated invariant T cells (MAITs). MAITs are located in the gut and are involved in monitoring flora levels, as well as in conveying distress signals to other areas of the body, indicating a role for MR1 in proper digestion and immune system function. MR1 exists as four alternatively spliced isoforms and is encoded by a gene which maps to human chromosome 1.

REFERENCES

1. Simister, N.E. and Mostov, K.E. 1989. An Fc receptor structurally related to MHC class I antigens. *Nature* 337: 184-187.
2. Hashimoto, K., Hirai, M. and Kurosawa, Y. 1995. A gene outside the human MHC related to classical HLA class I genes. *Science* 269: 693-695.
3. Yamaguchi, H., Kurosawa, Y. and Hashimoto, K. 1998. Expanded genomic organization of conserved mammalian MHC class I-related genes, human MR1 and its murine ortholog. *Biochem. Biophys. Res. Commun.* 250: 558-564.
4. Riegert, P., Wanner, V. and Bahram, S. 1998. Genomics, isoforms, expression, and phylogeny of the MHC class I-related MR1 gene. *J. Immunol.* 161: 4066-4077.
5. Parra-Cuadrado, J.F., Navarro, P., Mirones, I., Setién, F., Oteo, M. and Martínez-Naves, E. 2000. A study on the polymorphism of human MHC class I-related MR1 gene and identification of an MR1-like pseudogene. *Tissue Antigens* 56: 170-172.

CHROMOSOMAL LOCATION

Genetic locus: MR1 (human) mapping to 1q25.3; Mr1 (mouse) mapping to 1 G3.

SOURCE

MR1 (H-63) is a rabbit polyclonal antibody raised against amino acids 136-194 mapping within an internal region of MR1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

MR1 (H-63) is recommended for detection of MR1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 MR1 siRNA (h): sc-88089, MR1 siRNA (m): sc-106236, MR1 shRNA Plasmid (h): sc-88089-SH, MR1 shRNA Plasmid (m): sc-106236-SH, MR1 shRNA (h) Lentiviral Particles: sc-88089-V and MR1 shRNA (m) Lentiviral Particles: sc-106236-V.

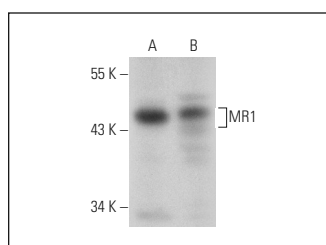
Molecular Weight of MR1: 39 kDa.

Positive Controls: MDA-MB-435S whole cell lysate: sc-364184 or MCF7 whole cell lysate: sc-2206.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MR1 (H-63): sc-292077. Western blot analysis of MR1 expression in MDA-MB-435S (A) and MCF7 (B) whole cell lysates.

PROTOCOLS

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

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Try **MR1 (B-3): sc-377312**, our highly recommended monoclonal alternative to MR1 (H-63).