SANTA CRUZ BIOTECHNOLOGY, INC.

MAdCAM-1 (17F5): sc-59790

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The recirculation of lymphocytes through different organs is thought to be regulated by adhesion molecules ("homing receptors") recognizing tissue-specific vascular addressins on the endothelium. The mucosal vascular addressin, MadCAM-1 (mucosal addressin cell adhesion molecule 1), is an immunoglobulin superfamily adhesion molecule for lymphocytes that is expressed by mucosal venules and helps direct lymphocyte traffic into Peyer's patches and the intestinal lamina propria. MadCAM-1 acts as an endothelial cell ligand for leukocyte homing receptors L-Selectin and Integrin $\alpha4/\beta7$. MadCAM-1 is strongly expressed on inflamed portal vein/sinusoidal endothelium in autoimmune-mediated liver disease and plays a major contributory role in the progression of chronic experimental autoimmune encephalomyelitis.

REFERENCES

1. Berlin, C., et al. 1993. $\alpha4/\beta7$ Integrin mediates lymphocyte binding to the mucosal vascular addressin MAdCAM-1. Cell 74: 185-185.
2. Hamann, A., et al. 1994. Role of $\alpha4$ Integrins in lymphocyte homing to mucosal tissues *in vivo*. J. Immunol. 152: 3282-3293.
3. Wang, C.C., et al. 2000. Homeodomain factor Nkx2-3 controls regional expression of leukocyte homing coreceptor MAdCAM-1 in specialized endothelial cells of the viscera. Dev. Biol. 224: 152-167.
4. Kanwar, J.R., et al. 2000. Prevention of a chronic progressive form of experimental autoimmune encephalomyelitis by an antibody against mucosal addressin cell adhesion molecule-1, given early in the course of disease progression. Immunol. Cell Biol. 78: 641-645.
5. Guilliano, M.J., et al. 2001. The micro-environment of human Peyer's patches inhibits the increase in CD38 expression associated with the germinal center reaction. J. Immunol. 166: 2179-2185.
6. Grant, A.J., et al. 2001. MAdCAM-1 expressed in chronic inflammatory liver disease supports mucosal lymphocyte adhesion to hepatic endothelium (MAdCAM-1 in chronic inflammatory liver disease). Hepatology 33: 1065-1072.

CHROMOSOMAL LOCATION

Genetic locus: MADCAM1 (human) mapping to 19p13.3.

SOURCE

MAdCAM-1 (17F5) is a mouse monoclonal antibody raised against recombinant soluble MAdCAM-1 fusion protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as fluorescein conjugate for flow cytometry, sc-59790 FITC, 100 tests.

STORAGE

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

APPLICATIONS

MAdCAM-1 (17F5) is recommended for detection of MAdCAM-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for MAdCAM-1 siRNA (h): sc-43037, MAdCAM-1 shRNA Plasmid (h): sc-43037-SH and MAdCAM-1 shRNA (h) Lentiviral Particles: sc-43037-V.

Molecular Weight (predicted) of MAdCAM-1 isoforms: 40/29 kDa.

Molecular Weight (observed) of MAdCAM-1: 29/40/55-60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, ECV304 cell lysate: sc-2269 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

RESEARCH USE

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

PROTOCOLS

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