



MAdCAM-1 (MECA-89): sc-19605

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 $\alpha 4 \beta 7$. 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

- Berlin, C., et al. 1993. $\alpha 4 \beta 7$ Integrin mediates lymphocyte binding to the mucosal vascular addressin MAdCAM-1. *Cell* 74: 185-195.
- Hamann, A., et al. 1994. Role of $\alpha 4$ Integrins in lymphocyte homing to mucosal tissues *in vivo*. *J. Immunol.* 152: 3282-3293.
- Wang, C.C., et al. 2000. Homeodomain factor Nkx2-3 controls regional expression of leukocyte homing co-receptor MAdCAM-1 in specialized endothelial cells of the viscera. *Dev. Biol.* 224: 152-167.
- 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.
- Guilliano, M.J., et al. 2001. The microenvironment of human Peyer's patches inhibits the increase in CD38 expression associated with the germinal center reaction. *J. Immunol.* 166: 2179-2185.
- 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 (mouse) mapping to 10 C1.

SOURCE

MAdCAM-1 (MECA-89) is a rat monoclonal antibody raised against endothelial cells from mesenteric and peripheral lymph nodes of BALB/c mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MAdCAM-1 (MECA-89) is available conjugated to either phycoerythrin (sc-19605 PE) or fluorescein (sc-19605 FITC), 200 μ g/ml, for IF, IHC(P) and FCM.

APPLICATIONS

MAdCAM-1 (MECA-89) is recommended for detection of MAdCAM-1 of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for MAdCAM-1 siRNA (m): sc-43038, MAdCAM-1 shRNA Plasmid (m): sc-43038-SH and MAdCAM-1 shRNA (m) Lentiviral Particles: sc-43038-V.

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

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

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.

PROTOCOLS

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