abcam

ab34247

Anti-MAdCAM1 antibody [314G8]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Protein within Human MADCAM1. The exact immunogen used to generate this antibody is proprietary information. Database link Q13477
Clone number	314G8
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	This antibody was purified from tissue culture supernatant.

Reactivity data

Flow Cyt

Expected

Species	Human
Dilution info	-

Notes	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

ELISA

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

FuncS

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-Fr

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information MADCAM1

Function	Cell adhesion leukocyte receptor expressed by mucosal venules, helps to direct lymphocyte traffic into mucosal tissues including the Peyer patches and the intestinal lamina propria. It can bind both integrin alpha-4/beta-7 and L-selectin, regulating both the passage and retention of leukocytes. Isoform 2, lacking the mucin-like domain, may be specialized in supporting integrin alpha-4/beta-7-dependent adhesion strengthening, independent of L-selectin binding.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Clone 314G8 reacts with the ligand binding first Ig domain and reports suggest that a splice variant exists in the gut which is not recognised by clone 314G8. Clone 314G8 is reported to block the interaction of MAdCAM1 with alpha 4 beta 7 (see reference 1).

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	MAdCAM-1 also known as mucosal addressin cell adhesion molecule 1 or mucosal tag is a protein with a molecular mass of approximately 60 kDa. The MAdCAM-1

	protein is expressed prominently on high endothelial venules within mucosal tissues such as the gut and the colon. Additionally it also appears in the endothelial cells of lymphoid tissues. Another name for it is MECA-79 highlighting its recognition by the MECA-79 antibody. Mucosal tags label regions where MAdCAM-1 assists in cell adhesion processes.
Biological function summary	MAdCAM-1 facilitates lymphocyte homing to mucosal tissues. It plays a part in the adhesive interactions between endothelial cells and lymphocytes as a component of the immune surveillance system enabling T cells and B cells to move into areas where they are needed. MAdCAM-1 forms complexes with integrins notably alpha4beta7 which are integral to its adhesion functions. Through its role in guiding lymphocytes it influences immune response and inflammation in mucosal environments.
Pathways	MAdCAM-1 contributes importantly to the trafficking of immune cells. It is involved in the regulation of cell adhesion and migration pathways. The protein interacts extensively with the integrin family especially integrin alpha4beta7 which facilitates lymphocyte entry into the intestinal wall. Additionally it works with chemokine receptors and cytokines that further influence cell movement and homing to specific tissues. This integrative role reinforces its importance in immune response and mucosal immunity.
Associated diseases and disorders	MAdCAM-1 links closely to inflammatory diseases such as Crohn's disease and ulcerative colitis. Its expression is upregulated in these inflammatory conditions which leads to increased lymphocyte accumulation in the gut. This condition exacerbates the inflammation and tissue damage characteristic of these disorders. MECA-79 a monoclonal antibody targets MAdCAM-1 to aid therapeutic approaches in mitigating inflammation driven by lymphocyte infiltration. Understanding MAdCAM-1 and its function offers potential pathways to target and treat these chronic inflammatory diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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