abcam

ab307734

Anti-MAdCAM1 antibody [EPR27555-87]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR27555-87
Purification technique	Affinity purification Protein A
Specificity	This product is not recommended for detecting endogenously expressed MAdCAM1 protein due to their low endogenous expression levels.
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000

Notes	This product is not recommended for detecting endogenously expressed MAdCAM1 protein due to their low endogenous expression levels.

Species	Recombinant fragment - Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat, Transfected cell line - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500 - 1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Transfected cell line - Human
Dilution info	1/500 - 1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-

Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Transfected cell line - Human
Dilution info	1/1000
Notes	-

Expected

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

Not recommended

Species	Mouse, Recombinant fragment - Human, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Transfected cell line - Human
Dilution info	1/500
Notes	-

Expected

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

Not recommended

Species	Mouse, Recombinant fragment - Human, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Recombinant fragment - Human, Mouse, Rat, Transfected cell line - Human
Dilution info	-
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	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
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

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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

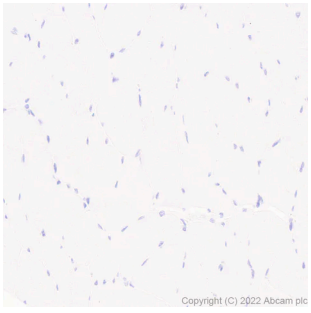
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

Full details and terms and conditions can be found here:
Terms & Conditions.

8 product images

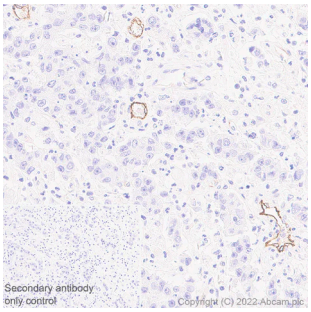


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MAdCAM1 antibody [EPR27555-87] (ab307734)

MAdCAM1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human skeletal muscle using rabbit Anti-MAdCAM1 antibody

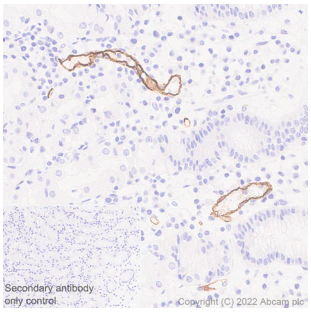
Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissue labeling MAdCAM1 with ab307734 at 1/500 dilution (1.0 µg/ml) followed by ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: no staining on human skeletal muscle (PMID:8989586). The section was incubated with ab307734 for 30 mins at room temperature. The

immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



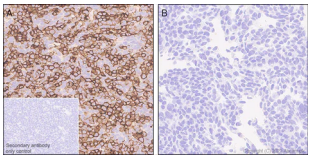
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MAdCAM1 antibody [EPR27555-87] (ab307734)

Immunohistochemical analysis of paraffin-embedded human gastric adenocarcinoma tissue labeling MAdCAM1 with ab307734 at 1/500 dilution (1.0 µg/ml) followed by ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on blood vessels of human gastric adenocarcinoma. The section was incubated with ab307734 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



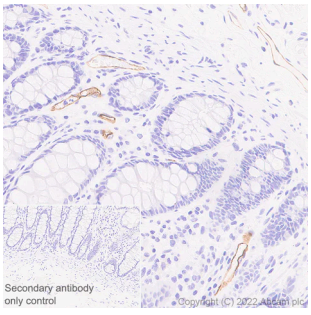
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MAdCAM1 antibody [EPR27555-87] (ab307734)

Immunohistochemical analysis of paraffin-embedded human stomach tissue labeling MAdCAM1 with ab307734 at 1/500 dilution (1.0 µg/ml) followed by ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on blood vessels of human stomach (PMID: 14742547). The section was incubated with ab307734 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MAdCAM1 antibody [EPR27555-87] (ab307734)

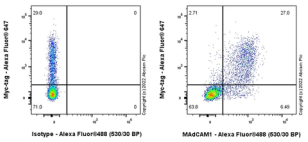
Immunohistochemical analysis of paraffin-embedded cell pellets labeling MAdCAM1 with ab307734 at 1/2000 dilution (0.25 µg/ml) followed by ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on HEK-293T transfected with a Myc-His-tagged MADCAM1 construct (image A). No staining on HEK-293T transfected with empty plasmid (image B). The section was incubated with ab307734 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MAdCAM1 antibody [EPR27555-87] (ab307734)

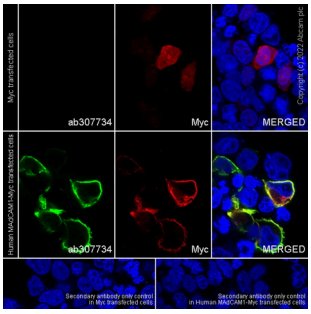
Immunohistochemical analysis of paraffin-embedded human colon tissue labeling MAdCAM1 with ab307734 at 1/500 dilution (1.0 µg/ml) followed by ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on blood vessels of human colon (PMID:8989586). The section was incubated with ab307734 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is ready to use LeicaDS9800 (Bond™

Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



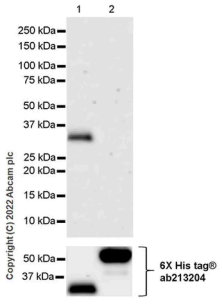
Flow Cytometry (Intracellular) - Anti-MAdCAM1 antibody [EPR27555-87] (ab307734)

Flow cytometric analysis of 2% paraformaldehyde fixed 0.1% Tween-20 permeabilized HEK-293T (human embryonic kidney) cells transfected with a human MAdCAM1 expression vector containing a myc-his tag cells labelling MAdCAM1 with ab307734 at 1/500 dilution (0.1ug)/ Right (Red) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Cells were surface stained with ab307734, then fixed with 2% PFA followed by intracellular staining with Myc-tag conjugated to Alexa Fluor® 647. Please note Flow Cyt was only tested with over-expression cells.



Immunocytochemistry/ Immunofluorescence - Anti-MAdCAM1 antibody [EPR27555-87] (ab307734)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HEK-293T (human embryonic kidney epithelial cell) cells labeling MAdCAM1 with ab307734 at 1/1000 dilution (0.5 µg/ml) followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (2 µg/ml) (Green). Confocal image showing positive staining in HEK-293T cells transfected with a human MAdCAM1 expression vector containing a myc tag. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). Myc-Tag Mouse mAb (Alexa Fluor® 647) was used as a counterstain at 1/100 dilution (0.38 µg/ml) (Red). The nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (2 µg/ml).



Western blot - Anti-MAdCAM1 antibody [EPR27555-87] (ab307734)

Blocking and diluting buffer and concentration: 5% NFDM/TBST This antibody reacts with human MAdCAM1 but does not react with mouse MAdCAM1. In Western blot, anti-His antibody (ab213204) staining at 1/5000 dilution. Exposure time: 180 seconds
All lanes:
Western blot - Anti-MAdCAM1 antibody [EPR27555-87] (ab307734) at 1/1000 dilution

Lane 1:
His-tagged human MAdCAM1 recombinant fragment at 10 ng

Lane 2:
293T cells transfected with a mouse MAdCAM1 expression vector containing a his tag whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 32 kDa

Exposure time: 180s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.