abcam

ab226059

Anti-ICAM1 antibody [EPR4776] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR4776
Purification technique	Affinity purification Protein A
Concentration	1.04 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information ICAM1

Function	Cell adhesion molecule that functions as a receptor ligand of the signaling receptor ITGAL:ITGB2/LFA-1 (lymphocyte-function associated (LFA) molecule 1) ensuring leukocyte cell-cell adhesion, by providing a calibrated system to namely adjust T-cell killing to the antigen stimulation strength (PubMed:3086451, PubMed:3340213, PubMed:38195629). Also functions as a ligand receptor of the signaling receptor ITGAM:ITGB2/MAC-1 ensuring adhesion between stimulated neutrophils and stimulated endothelial cells (PubMed:1980124). During leukocyte trans-endothelial migration, ICAM1 engagement promotes the assembly of endothelial apical cups through ARHGEF26/SGEF and RHOG activation (PubMed:17875742). Promotes cell aggregation in epithelial cells through interaction with MUC1 (PubMed:11173916). (Microbial infection) Acts as a receptor for major receptor group rhinovirus A-B capsid proteins. (Microbial infection) Acts as a receptor for Coxsackievirus A21 capsid proteins. (Microbial infection) Upon Kaposi's sarcoma-associated herpesvirus/HHV-8 infection, is degraded by viral E3 ubiquitin ligase MIR2, presumably to prevent lysis of infected cells by cytotoxic T-lymphocytes and NK cell.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab226059 is the carrier-free version of ab109361.

Species reactivity

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

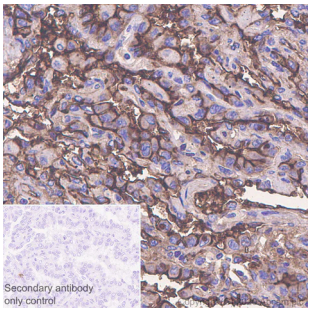
We do not recommend this combination. It is not covered by our product promise.

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.

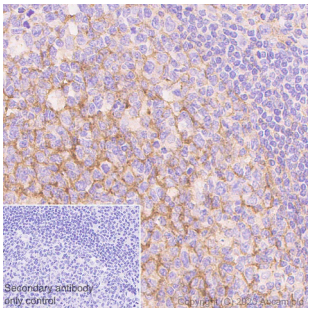
9 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ICAM1 antibody [EPR4776] - BSA and Azide free (ab226059)

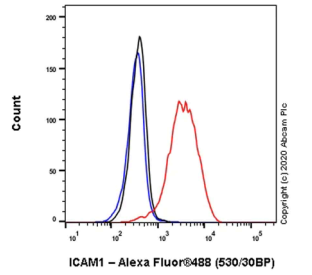
ICAM1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-ICAM1 antibody

This data was developed using ab109361, the same antibody clone in a different buffer formulation.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human lung carcinoma tissue sections labeling ICAM1 with Purified ab109361 at 1/100 dilution (6.79 µg/mL). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ICAM1 antibody [EPR4776] - BSA and Azide free (ab226059)

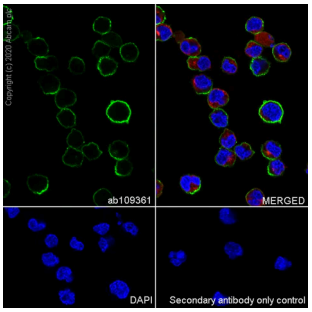
This data was developed using ab109361, the same antibody clone in a different buffer formulation.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human tonsil tissue sections labeling ICAM1 with Purified ab109361 at 1/100 dilution (6.79 µg/mL). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Flow Cytometry (Intracellular) - Anti-ICAM1 antibody [EPR4776] - BSA and Azide free (ab226059)

ICAM1 Flow Cytometry (Intracellular) staining using rabbit Anti-ICAM1 antibody

This data was developed using ab109361, the same antibody clone in a different buffer formulation. Intracellular Flow Cytometry analysis of Ramos (Human Burkitt's lymphoma B lymphocyte) cells labeling ICAM1 with Purified ab109361 at 1/70 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).

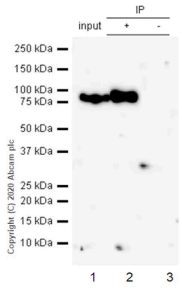


Immunocytochemistry/ Immunofluorescence - Anti-ICAM1 antibody [EPR4776] - BSA and Azide free (ab226059)

ICAM1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ICAM1 antibody

This data was developed using ab109361, the same antibody clone in a different buffer formulation.
Immunocytochemistry analysis of Raji (Human Burkitt's lymphoma B lymphocyte) cells labeling ICAM1 with Purified ab109361 at 1/100 dilution (6.79 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 dilution (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary

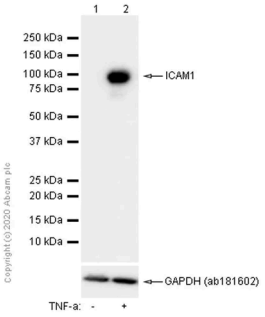
antibody at 1/1000 dilution (2 µg/mL). DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunoprecipitation - Anti-ICAM1 antibody [EPR4776] - BSA and Azide free (ab226059)

This data was developed using ab109361, the same antibody clone in a different buffer formulation.
Purified ab109361 at 1/30 dilution (2µg) immunoprecipitating ICAM1 in Raji whole cell lysate.
Lane 1 (input): Raji (Human Burkitt's lymphoma B lymphocyte) whole cell lysate 10µg
Lane 2 (+): ab109361 + Raji whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab109361 in Raji whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/1000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 89 kDa
All lanes:
Immunoprecipitation - Anti-ICAM1 antibody [EPR4776] (ab109361)

Predicted band size: 57 kDa



Western blot - Anti-ICAM1 antibody [EPR4776] - BSA and Azide free (ab226059)

ICAM1 Western blot staining using rabbit Anti-ICAM1 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST

This data was developed using ab109361, the same antibody clone in a different buffer formulation.

All lanes:
Western blot - Anti-ICAM1 antibody [EPR4776] (ab109361) at 1/1000 dilution

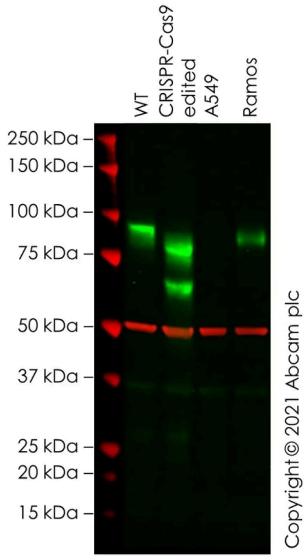
Lane 1:
HUVEC (Human umbilical vein endothelial cell) whole cell lysate at 15 µg

Lane 2:
HUVEC (Human umbilical vein endothelial cell) treated with 10ng/ml TNF-α for 18 hours whole cell lysate at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 57 kDa



Western blot - Anti-ICAM1 antibody [EPR4776] - BSA and Azide free (ab226059)

ICAM1 Western blot staining using rabbit Anti-ICAM1 antibody

False colour image of Western blot: Anti-ICAM1 antibody [EPR4776] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (ab7291) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab109361 was shown to bind specifically to ICAM1. A band was observed at 90 kDa in wild-type HeLa cell lysates with no signal observed at this size in Icam1 knockout cell line ab261742 (knockout cell lysate ab256947). The band observed in the CRISPR-Cas9 edited lysate lane below 90 kDa is likely to represent a truncated form of ICAM1. This has not been investigated further and the functional properties of the gene product have not been determined. To generate this image, wild-type and Icam1 CRISPR-Cas9 edited HeLa cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) at 1/20000 dilution.
All lanes:
Western blot - Anti-ICAM1 antibody [EPR4776] (ab109361) at 1/1000 dilution

Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:
ICAM1 CRISPR-Cas9 edited HeLa cell lysate at 20 µg

Lane 2:
Western blot - Human ICAM1 knockout HeLa cell line (ab261742)

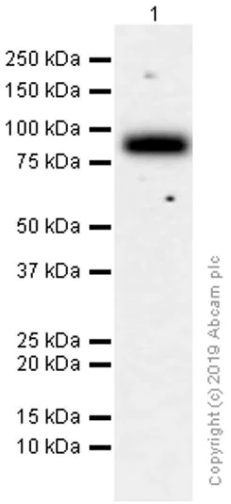
Lane 3:
A549 cell lysate at 20 µg

Lane 4:
Ramos cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 57 kDa

Observed band size: 90 kDa



Western blot - Anti-ICAM1 antibody [EPR4776] - BSA and Azide free (ab226059)

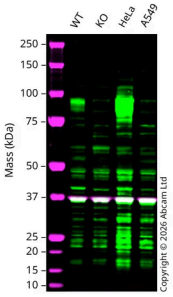
This data was developed using ab109361, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-ICAM1 antibody [EPR4776] (ab109361) at 1/1000 dilution

All lanes:
Ramos (Human Burkitt's lymphoma B lymphocyte) whole cell lysate at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 57 kDa



Western blot - Anti-ICAM1 antibody [EPR4776] - BSA and Azide free (ab226059)

ICAM1 Western blot staining using rabbit Anti-ICAM1 antibody

This data was developed using ab109361, the same antibody clone in a different buffer formulation.

Western blot: Anti-ICAM1 antibody [EPR4776] ab109361 staining at 1/2000 dilution, shown in green; Mouse anti GAPDH ab8245 loading control staining at 1/20000 dilution, shown in magenta. A band was observed at 90 kDa in Wild-type U-87 MG cell lysates with no signal observed at this size in ICAM1 knockout U-87 MG cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3% Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW and Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-ICAM1 antibody [EPR4776] (ab109361) at 1/2000 dilution

Lane 1:
Wild-type U-87 MG at 20 µg

Lane 2:
Western blot - Human ICAM1 knockout U-87 MG cell line (ab306707) at 20 µg

Lane 3:
HeLa at 20 µg

Lane 4:
A549 at 20 µg

Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 90 kDa

Observed band size: 90 kDa

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