abcam

ab226157

Anti-PECAM-1/CD31 antibody [EP3095] - BSA and Azide free

Anti-PECAM-1/CD31 antibody [EP3095] - BSA and Azide free (ab226157) is a rabbit recombinant monoclonal antibody provided in a PBS only buffer for easy conjugation detecting PECAM-1/CD31 in **Western Blot, Flow Cytometry (Intra), IHC-P**. Suitable for **Human**.

- BSA, sodium azide, and glycerol-free for easy conjugation
- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb

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	EP3095
Purification technique	Affinity purification Protein A
Specificity	This antibody gave positive results in mouse and rat tissue staining via IHC-P, but we have had difficulties obtaining consistent positive results in WB with mouse and rat samples. Thus, at this time we unfortunately cannot guarantee this antibody to recognize mouse and rat CD31, and optimization may be necessary when working with these species.
Concentration	1.014 - 1.055 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-
Notes	The ideal fixation time will depend on the size of the tissue block and the type of tissue, but fixation between 18–24h is suitable for most samples. Positive Control: Hu tonsil tissue Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Expected

Species	Human
Dilution info	-
Notes	Treat samples with PNGase F or phosphatase to confirm the specificity of bands if necessary. The observed band size of CD31 may not the same as predicted MWs in WB due to the different forms and modifications of CD31. Hu Isoform 1-6: 79-83 kDa (predicted) Observed band size is around 130 kDa Positive Control: HUVEC and Jurkat cell lysates (ab7899); Human spleen and kidney tissue lysate. Negative Control: NIH/3T3 whole cell lysate (ab7179).

ICC/IF

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information PECAM-1/CD31

Function

Cell adhesion molecule which is required for leukocyte transendothelial migration (TEM) under most inflammatory conditions (PubMed:17580308, PubMed:19342684). Tyr-690 plays a critical role in TEM and is required for efficient trafficking of PECAM1 to and from the lateral border recycling compartment (LBRC) and is also essential for the LBRC membrane to be targeted around migrating leukocytes (PubMed:19342684). Trans-homophilic interaction may play a role in endothelial cell-cell adhesion via cell junctions (PubMed:27958302). Heterophilic interaction with CD177 plays a role in transendothelial migration of neutrophils (PubMed:17580308). Homophilic ligation of PECAM1 prevents macrophage-mediated phagocytosis of neighboring viable leukocytes by transmitting a detachment signal (PubMed:12110892). Promotes macrophage-mediated phagocytosis of apoptotic leukocytes by tethering them to the phagocytic cells; PECAM1-mediated detachment signal appears to be disabled in apoptotic leukocytes (PubMed:12110892). Modulates bradykinin receptor BDKRB2 activation (PubMed:18672896). Regulates bradykinin- and hyperosmotic shock-induced ERK1/2 activation in endothelial cells (PubMed:18672896). Induces susceptibility to atherosclerosis (By similarity). Isoform Delta15. Does not protect against apoptosis.

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

What is this antibody validated in?
Anti-CD31 antibody [EP3095] - BSA and Azide free (ab226157) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P) in Human samples.

What is the molecular weight of CD31?
Anti-CD31 [EP3095] - BSA and Azide free (ab226157) specifically detects a band for CD31 (UniProt: P16284) at a molecular weight of 82kDa.

Other related products
We have a range of other formats of antibody clone [EP3095] also available for your convenience: ab134168, Carrier free - ab216459, Carrier free - ab226157, PE - ab305782, APC - ab305783, HRP - ab305784, Alkaline Phosphatase - ab308935, Alexa Fluor® 488 - ab309873, Alexa Fluor® 647 - ab310240, Alexa Fluor® 594 - ab310691, Alexa Fluor® 555 - ab312221

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

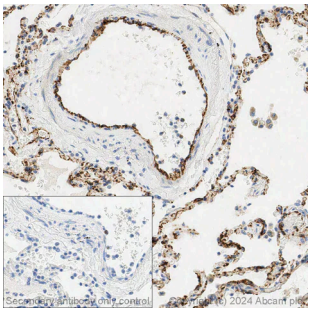
We do not recommend this combination. It is not covered by our product promise.

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

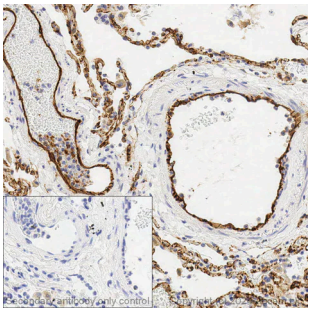


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PECAM-1/CD31 antibody [EP3095] - BSA and Azide free (ab226157)

PECAM-1/CD31 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of human lung using rabbit Anti-PECAM-1/CD31 antibody

This data was developed using the same antibody clone in a different buffer formulation (ab182981).

Immunohistochemical analysis of formalin fixed paraffin embedded human lung labelling CD31 with ab182981 at a concentration of 0.52 µg/ml. The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with an OptiView DAB IHC Detection Kit. Heat mediated antigen retrieval was conducted for 32 mins at 100°C with ULTRA cell conditioning solution (CC1, pH 8.5). ab182981Anti-CD31 antibody was incubated at 37°C for 16 mins. Sections were counterstained with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control.

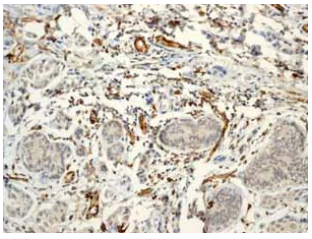


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PECAM-1/CD31 antibody [EP3095] - BSA and Azide free (ab226157)

PECAM-1/CD31 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of human lung using rabbit Anti-PECAM-1/CD31 antibody

This data was developed using the same antibody clone in a different buffer formulation (ab182981).

Immunohistochemical analysis of formalin fixed paraffin embedded human lung labelling CD31 with ab182981 at a concentration of 0.35 µg/ml. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with a Bond™ Polymer Refine Detection kit. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution 2) for 20 mins.ab182981Anti-CD31 antibody was incubated for 30 mins at room temperature. Sections were counterstained with Hematoxylin. Image inset shows absence of staining in secondary antibody only control.

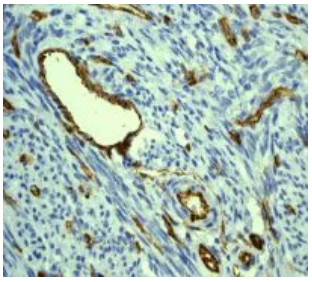


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PECAM-1/CD31 antibody [EP3095] - BSA and Azide free (ab226157)

PECAM-1/CD31 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PECAM-1/CD31 antibody

Immunohistochemical analysis of paraffin embedded Human Breast carcinoma vessels tissue using ab134168 showing +ve staining.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134168).

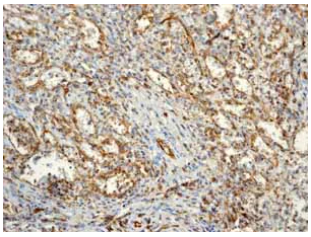


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PECAM-1/CD31 antibody [EP3095] - BSA and Azide free (ab226157)

PECAM-1/CD31 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PECAM-1/CD31 antibody

Immunohistochemical analysis of paraffin-embedded Human uterus tissue, staining CD31 using ab134168 at a 1/250 dilution. Note membrane staining of endothelial cells.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134168).

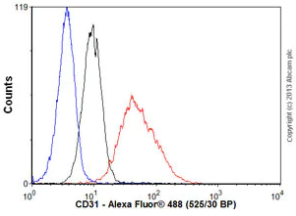


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PECAM-1/CD31 antibody [EP3095] - BSA and Azide free (ab226157)

PECAM-1/CD31 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PECAM-1/CD31 antibody

Immunohistochemical analysis of paraffin embedded normal Human spleen vessels tissue using ab134168 showing +ve staining.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

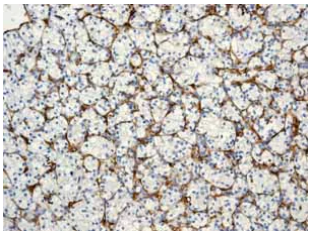
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134168).



Flow Cytometry (Intracellular) - Anti-PECAM-1/CD31 antibody [EP3095] - BSA and Azide free (ab226157)

PECAM-1/CD31 Flow Cytometry (Intracellular) staining using rabbit Anti-PECAM-1/CD31 antibody

Overlay histogram showing Jurkat cells stained with ab134168 (red line). The cells were fixed with 80% methanol (5 min)/ and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab134168, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134168).

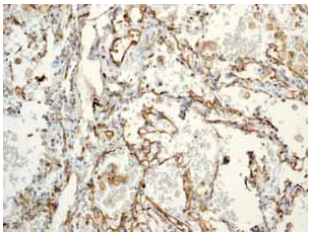


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PECAM-1/CD31 antibody [EP3095] - BSA and Azide free (ab226157)

PECAM-1/CD31 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PECAM-1/CD31 antibody

Immunohistochemical analysis of paraffin embedded Human Clear cell carcinoma of kidney tissue using ab134168 showing +ve staining.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134168).

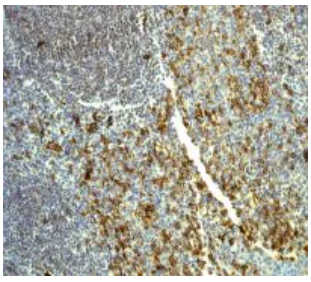


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PECAM-1/CD31 antibody [EP3095] - BSA and Azide free (ab226157)

PECAM-1/CD31 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PECAM-1/CD31 antibody

Immunohistochemical analysis of paraffin embedded normal Human lung tissue using ab134168 showing +ve staining.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134168).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PECAM-1/CD31 antibody [EP3095] - BSA and Azide free (ab226157)

PECAM-1/CD31 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PECAM-1/CD31 antibody

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue, staining CD31 using ab134168 at a 1/250 dilution. Note membrane staining of endothelial cells.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134168).

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