abcam

ab32457

Anti-PECAM-1/CD31 antibody

Anti-PECAM-1/CD31 antibody (ab32457) is a rabbit polyclonal antibody detecting PECAM-1/CD31 in **Western Blot, Flow Cytometry (Intra), IHC-P**. Suitable for **Human**.

- Over 90 publications
- Trusted since 2006

Lab Essentials

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Purification technique	Affinity purification Immunogen
Concentration	0.9 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC

Tested

Species	Human
Dilution info	5 µg/mL
Notes	Use 0.3M glycine to quench autofluorescence caused by aldehydes.

Positive Control: HUVEC cells

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	0.1-1 µg for 10^5 Cells
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	1 µg/mL
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).

IHC-P

Tested

Species	Human
Dilution info	1/2000
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

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 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

What is this antibody validated in?
Anti-CD31 antibody (ab32457) is a rabbit polyclonal 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 (ab32457) specifically detects a band for CD31 (UniProt: P16284) at a molecular weight of 130kDa.

Trusted by the scientific community
Anti-CD31 (ab32457) was first used in a scientific publication in 2006 and has been cited over 90 times in peer-reviewed journals.

Reviewed by scientists
Anti-CD31 (ab32457) has over 10 independent reviews from customers.

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

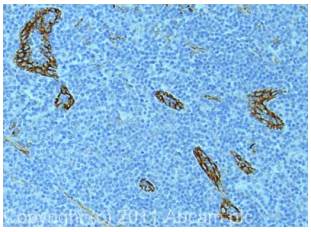
We do not recommend this combination. It is not covered by our product promise.

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.

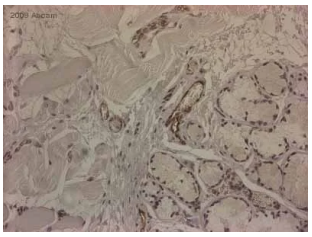
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PECAM-1/CD31 antibody (ab32457)

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

IHC image of ab32457 staining in human tonsil formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab32457, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times

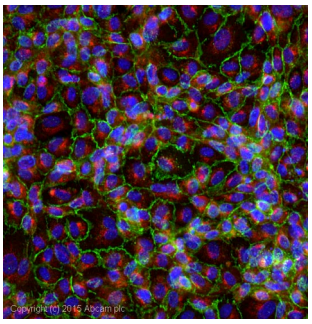


This image is courtesy of a customer review submitted by Antibody Solutions Ltd.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PECAM-1/CD31 antibody (ab32457)

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

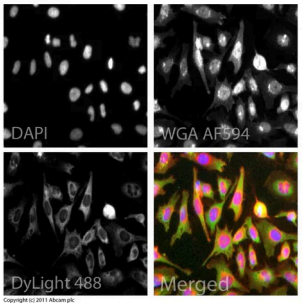
ab32457 staining CD31 in human tonsil tissue section by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue underwent fixation in formaldehyde, heat mediated antigen retrieval in Citrate buffer pH 6.0 and blocking (5 minutes/peroxidase block then 10 minutes/protein block) for 15 minutes at 20°C. The primary antibody was diluted, 1/2000 and incubated with sample for 45 minutes at 20°C. A HRP conjugated goat polyclonal to rabbit IgG was used undiluted as secondary.



Immunocytochemistry - Anti-PECAM-1/CD31 antibody (ab32457)

PECAM-1/CD31 Immunocytochemistry staining using rabbit Anti-PECAM-1/CD31 antibody

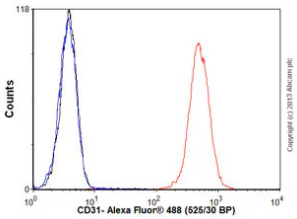
ab32457 stained HUVEC cells. The cells were 100% methanol fixed for 5 minutes at -20°C and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1hour at room temperature to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab32457 at 1µg/ml) overnight at +4°C. The secondary antibody (pseudo-colored green) was Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed (ab150081) used at a 1/1000 dilution for 1hour at room temperature. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1hour at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43µM for 1hour at room temperature.



Immunocytochemistry - Anti-PECAM-1/CD31 antibody (ab32457)

PECAM-1/CD31 Immunocytochemistry staining using rabbit Anti-PECAM-1/CD31 antibody

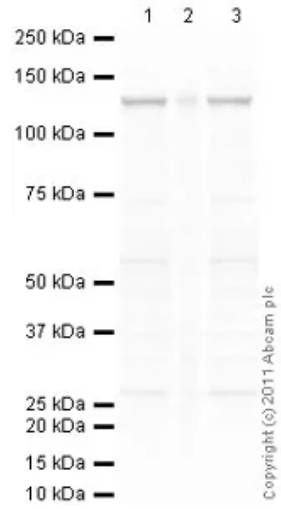
ICC image of ab32457 stained HeLa cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab32457, 5µg/ml) overnight at +4°C. The secondary antibody (green) was ab96899, DyLight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Flow Cytometry (Intracellular) - Anti-PECAM-1/CD31 antibody (ab32457)

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

Overlay histogram showing Jurkat cells stained with ab32457 (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 (ab32457, 0.1µg/1x10^6 cells) 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 (polyclonal) (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.



Western blot - Anti-PECAM-1/CD31 antibody (ab32457)

PECAM-1/CD31 Western blot staining using rabbit Anti-PECAM-1/CD31 antibody

All lanes:
Western blot - Anti-PECAM-1/CD31 antibody (ab32457) at 1 µg/mL

Lane 1:
Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate at 20 µg

Lane 2:
HUVEC (Human Umbilical Vein Endothelial Cell) Whole Cell Lysate at 20 µg

Lane 3:
Raji (Human Burkitt's lymphoma cell line) Whole Cell Lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Performed under reducing conditions.

Predicted band size: 82 kDa

Observed band size: 130 kDa, 26 kDa, 55 kDa

Exposure time: 30s

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