

Anti-CD31 antibody ab32457

★★★★☆ [12 Abreviews](#) [78 References](#) [画像数 6](#)

製品の概要

製品名	Anti-CD31 antibody
製品の詳細	Rabbit polyclonal to CD31
由来種	Rabbit
アプリケーション	適用あり: ICC, IHC-P, WB, Flow Cyt (Intra)
種交差性	交差種: Human
免疫原	Synthetic peptide corresponding to Human CD31 aa 600-700 conjugated to keyhole limpet haemocyanin. (Peptide available as ab32456)

特記事項

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
バッファー	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
精製度	Immunogen affinity purified
ポリ/モノ	ポリクローナル
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab32457の使用に適用されます**

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
ICC	★★★★★ (4)	Use a concentration of 5 µg/ml. It is recommended to incubate cells with 0.1% Triton-X for 5 min to detect nuclear antigen. Use 0.3M glycine to quench autofluorescence caused by aldehydes. Positive Control: HUVEC cells
IHC-P	★★★★☆ (3)	1/2000. 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
WB	★★★★★ (2)	Use a concentration of 1 µg/ml. Detects a band of approximately 130 kDa (predicted molecular weight: 130 kDa). Treat samples with PNGase F or phosphatase to confirm the specificity of bands if necessary. The observed band size of CD31 may not be the same as predicted MWs in WB due to the different forms and modifications of CD31.
Flow Cyt (Intra)		Use 0.1-1µg for 10 ⁶ cells. ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

ターゲット情報

機能

Induces susceptibility to atherosclerosis (By similarity). Cell adhesion molecule which is required for leukocyte transendothelial migration (TEM) under most inflammatory conditions. 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. Prevents phagocyte ingestion of closely apposed viable cells by transmitting 'detachment' signals, and changes function on apoptosis, promoting tethering of dying cells to phagocytes (the encounter of a viable cell with a phagocyte via the homophilic interaction of PECAM1 on both cell surfaces leads to the viable cell's active repulsion from the phagocyte. During apoptosis, the inside-out signaling of PECAM1 is somehow disabled so that the apoptotic cell does not actively reject the phagocyte anymore. The lack of this repulsion signal together with the interaction of the eat-me signals and their respective receptors causes the attachment of the apoptotic cell to the phagocyte, thus triggering the process of engulfment). Isoform Delta15 is unable to protect against apoptosis. Modulates BDKRB2 activation. Regulates bradykinin- and hyperosmotic shock-induced ERK1/2 activation in human umbilical cord vein cells (HUVEC).

組織特異性

Expressed on platelets and leukocytes and is primarily concentrated at the borders between

endothelial cells. Isoform Long predominates in all tissues examined. Isoform Delta12 is detected only in trachea. Isoform Delta14-15 is only detected in lung. Isoform Delta14 is detected in all tissues examined with the strongest expression in heart. Isoform Delta15 is expressed in brain, testis, ovary, cell surface of platelets, human umbilical vein endothelial cells (HUVECs), Jurkat T-cell leukemia, human erythroleukemia (HEL) and U937 histiocytic lymphoma cell lines (at protein level).

配列類似性

Contains 6 Ig-like C2-type (immunoglobulin-like) domains.

ドメイン

The Ig-like C2-type domains 2 and 3 contribute to formation of the complex with BDKRB2 and in regulation of its activity.

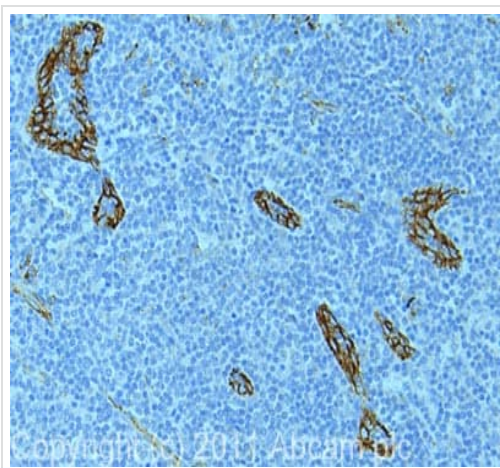
翻訳後修飾

Phosphorylated on Ser and Tyr residues after cellular activation. In endothelial cells Fyn mediates mechanical-force (stretch or pull) induced tyrosine phosphorylation.

細胞内局在

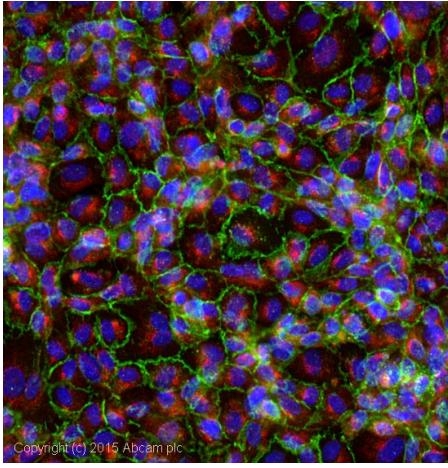
Membrane. Cell junction. Localizes to the lateral border recycling compartment (LBRC) and recycles from the LBRC to the junction in resting endothelial cells and Cell junction. Localizes to the lateral border recycling compartment (LBRC) and recycles from the LBRC to the junction in resting endothelial cells.

画像



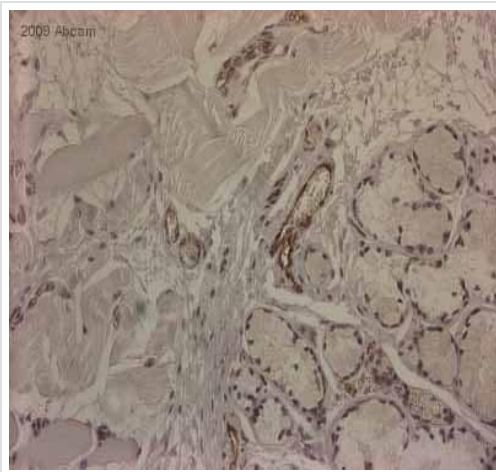
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD31 antibody (ab32457)

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



Immunocytochemistry - Anti-CD31 antibody (ab32457)

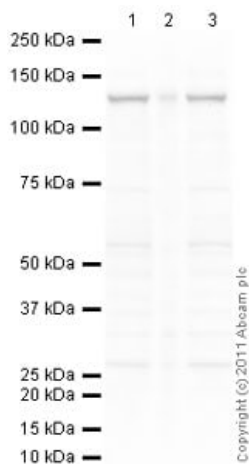
ab32457 stained HUVEC cells. The cells were 100% methanol fixed for 5 minutes at -20°C and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1hour at room temperature to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab32457 at $1\mu\text{g}/\text{ml}$) overnight at $+4^{\circ}\text{C}$. 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 $1.43\mu\text{M}$ for 1hour at room temperature.



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

This image is courtesy of an Abreview submitted by Antibody Solutions Ltd.

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.



Western blot - Anti-CD31 antibody (ab32457)

All lanes : Anti-CD31 antibody (ab32457) at $1\mu\text{g}/\text{ml}$

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

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

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

Lysates/proteins at $20\mu\text{g}$ per lane.

Secondary

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

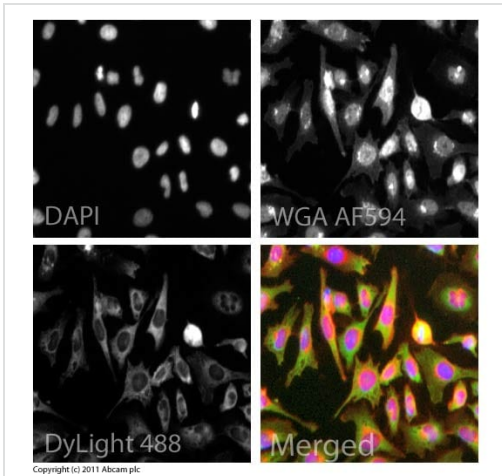
Performed under reducing conditions.

Predicted band size: 130 kDa

Observed band size: 130 kDa

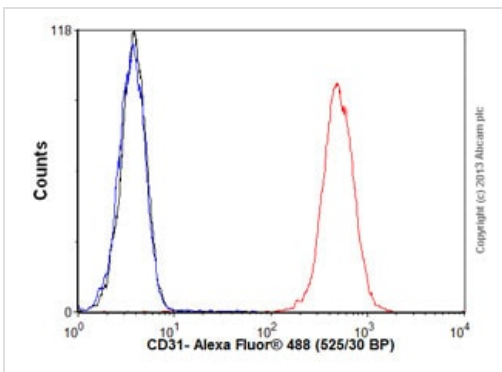
Additional bands at: 26 kDa, 55 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 30 seconds



Immunocytochemistry - Anti-CD31 antibody
(ab32457)

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-CD31 antibody
(ab32457)

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/1x10⁶ 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/1x10⁶ 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.

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