abcam

Product datasheet

Anti-CD31 antibody [C31.3] ab187377

★★★★★ 2 Abreviews 13 References 5 Images

Overview

Product name	Anti-CD31 antibody [C31.3]
Description	Mouse monoclonal [C31.3] to CD31
Host species	Mouse
Tested applications	**Suitable for:** ICC, Flow Cyt, WB, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant full length protein corresponding to Human CD31 aa 1-738. Database link: **P16284**
Positive control	IHC-P: Human tonsil and angiosarcoma tissues; ICC and Flow Cyt: Jurkat cells; WB: Jurkat cell lysate.
General notes	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

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: 99% PBS, 0.05% BSA
Purity	Protein G purified
Clonality	Monoclonal
Clone number	C31.3
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab187377 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC	★★★★★ (1)	Use a concentration of 1 - 2 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
Flow Cyt		Use 1-2µg for 10^6 cells. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
WB		Use a concentration of 1 - 2 µg/ml. Predicted molecular weight: 82 kDa. 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.
IHC-P	★★★★★ (1)	Use a concentration of 1 - 2 µg/ml. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. 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

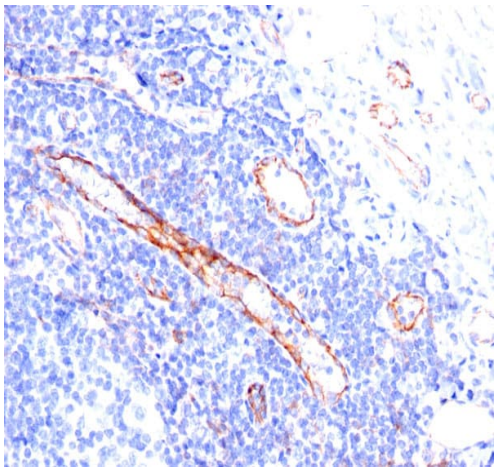
Target

Function

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).

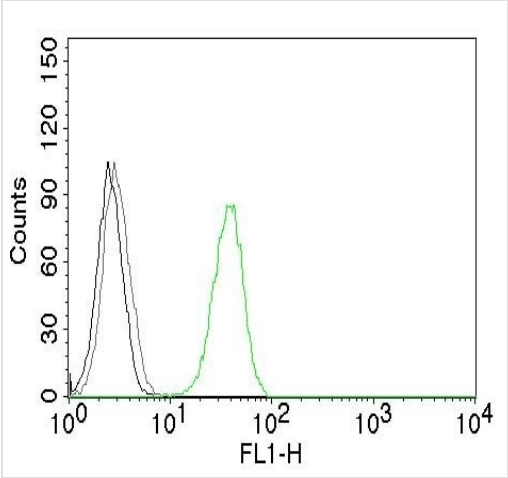
Tissue specificity	Expressed on platelets and leukocytes and is primarily concentrated at the borders between endothelial cells. Isoform Long predominates in all tissues examined. Isoform Delta12 is detected only in trachea. Isoform Delta14-15 is only detected in lung. Isoform Delta14 is detected in 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).
Sequence similarities	Contains 6 Ig-like C2-type (immunoglobulin-like) domains.
Domain	The Ig-like C2-type domains 2 and 3 contribute to formation of the complex with BDKRB2 and in regulation of its activity.
Post-translational modifications	Phosphorylated on Ser and Tyr residues after cellular activation. In endothelial cells Fyn mediates mechanical-force (stretch or pull) induced tyrosine phosphorylation.
Cellular localization	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.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD31 antibody [C31.3] (ab187377)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human tonsil tissue labelling CD31 with ab187377.

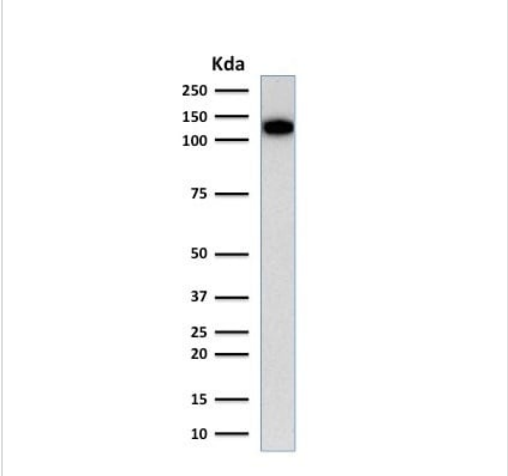


Flow Cytometry - Anti-CD31 antibody [C31.3] (ab187377)

Flow Cytometry analysis of Jurkat cells labeling CD31 with ab187377 (Green).

Black: Cells alone;

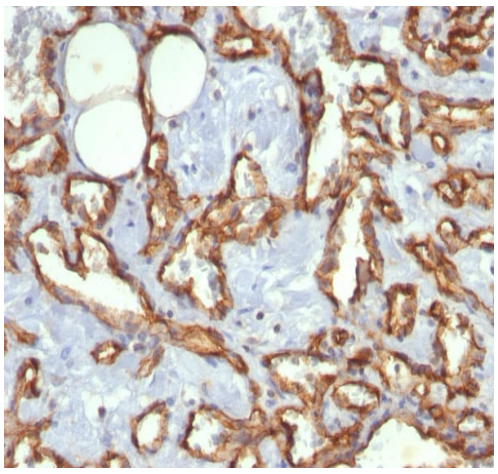
Grey: Isotype Control.



Western blot - Anti-CD31 antibody [C31.3] (ab187377)

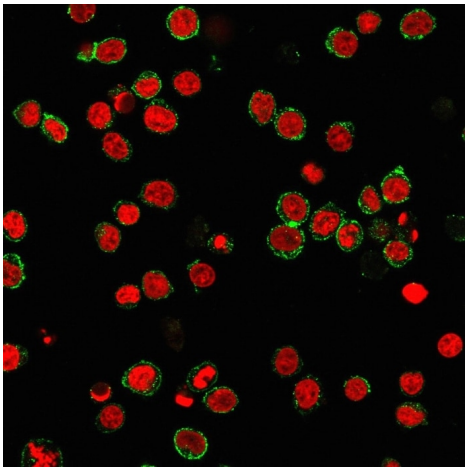
Anti-CD31 antibody [C31.3] (ab187377) at 1 µg/ml + Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate

Predicted band size: 82 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD31 antibody [C31.3] (ab187377)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human angiosarcoma tissue labelling CD31 with ab187377.



Immunocytochemistry - Anti-CD31 antibody [C31.3] (ab187377)

Immunocytochemistry analysis of PFA-fixed Jurkat cells labeling CD31 with ab187377 followed by Goat anti-Mouse IgG-CF488 (Green). The nuclear counterstain is Nucspot (Red).

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