

Product datasheet

Anti-CD31 antibody [WM59] ab218

Recombinant

★★★★☆ [1 Abreviews](#) [7 References](#) [3 Images](#)

Overview

Product name	Anti-CD31 antibody [WM59]
Description	Mouse monoclonal [WM59] to CD31
Host species	Mouse
Tested applications	Suitable for: Flow Cyt, ICC/IF Unsuitable for: IHC-P
Species reactivity	Reacts with: Human
Immunogen	Tissue, cells or virus. This information is proprietary to Abcam and/or its suppliers.
Positive control	ICC: HUVEC cells. Flow Cyt: HUVEC cells.
General notes	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p>

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: 0.01% Sodium azide Constituents: PBS, 0.05% BSA, 40% Glycerol (glycerin, glycerine)
Purity	Protein A purified
Clonality	Monoclonal
Clone number	WM59
Isotype	IgG1

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab218 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
Flow Cyt		Use a concentration of 1.062 µg/ml.
ICC/IF	★ ★ ★ ★ ★ (1)	Use a concentration of 10.62 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

Application notes

Is unsuitable for IHC-P.

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

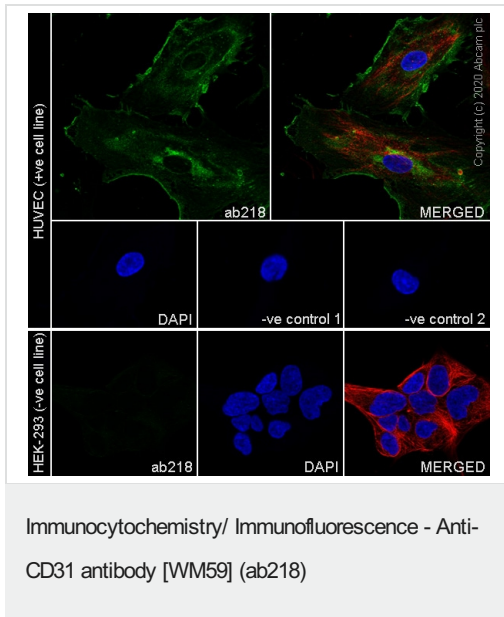
Phosphorylated on Ser and Tyr residues after cellular activation. In endothelial cells Fyn mediates mechanical-force (stretch or pull) induced tyrosine phosphorylation.

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

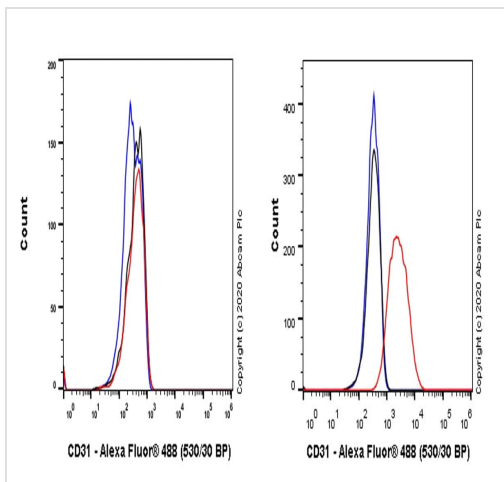


Immunocytochemistry analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HUVEC cells labelling CD31 with ab218 at 1/100 dilution (10.62µg/ml), followed by **ab150113** Goat Anti-mouse IgG H&L (Alexa Fluor® 488) antibody at 1/1000 (2µg/ml) dilution (Green). Confocal image showing cytoplasmic and membranous staining in HUVEC cell line. **ab179513** Anti-beta Tubulin rabbit monoclonal antibody was used to counterstain tubulin at 1/500 dilution, followed by **ab150080** Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) at a 1/500 dilution (Red). The nuclear counterstain was DAPI (Blue).

Negative control cell: HEK-293 (PMID: 27097314).

Negative control 1: ab218 at a 1/100 dilution (10.62µg/ml) followed by **ab150080** at a 1/500 dilution (4µg/ml).

Negative control 2: **ab179513** at a 1/500 dilution (4µg/ml) followed by **ab150113** at a 1/1000 dilution (4µg/ml).




Flow cytometric analysis of HEK 293 (human embryonic kidney epithelial cell) (Left panel) / HUVEC (human umbilical vein endothelial cell) (Right panel) cells labelling CD31 with ab218 at 1/1000 dilution (1.062µg/ml) (Red) compared with a mouse monoclonal IgG (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti mouse IgG (Alexa Fluor® 488, **ab150113**) at 1/2000 dilution was used as the secondary antibody.

Negative control: HEK 293 (PMID: 27097314).

Gated on viable cells.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results

Long-term and scalable supply
Recombinant technology

Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

Anti-CD31 antibody [WM59] (ab218)

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