

Product datasheet

Anti-CD31 antibody [MEC 7.46] ab7388

Recombinant

★★★★☆ [8 Abreviews](#) [117 References](#) [3 Images](#)

Overview

Product name	Anti-CD31 antibody [MEC 7.46]
Description	Rat monoclonal [MEC 7.46] to CD31
Host species	Rat
Specificity	The antibody reacts with the murine form of the Platelet-Endothelial Cell Adhesion Molecule. The reactivity of the antibody is restricted to the isoform of the molecule that is selectively expressed by endothelial cells. The antibody precipitates a 130 kDa molecule present on the membrane of endothelial cell presents on all mouse blood vessels both in normal and inflamed or tumor tissues. The antigen is predominantly present at the lateral borders of endothelial cells as described for human PECAM-1.
Tested applications	Suitable for: Flow Cyt, ICC/IF Unsuitable for: IP or WB
Species reactivity	Reacts with: Mouse
Immunogen	Tissue, cells or virus. This information is proprietary to Abcam and/or its suppliers.
Positive control	ICC: mouse bEnd.3 cell line; Flow Cyt: mouse bEnd.3 cell line
General notes	This product has switched from a hybridoma to recombinant production method on 08 th March 2021. 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 production For more information see here .

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. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 0.5% BSA, 40% Glycerol (glycerin, glycerine)

Purity	Protein A purified
Clonality	Monoclonal
Clone number	MEC 7.46
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab7388 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		1/1000.
ICC/IF	★ ★ ★ ☆ ☆ (1)	1/50.

Application notes Is unsuitable for IP or WB.

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 Phosphorylated on Ser and Tyr residues after cellular activation. In endothelial cells Fyn mediates

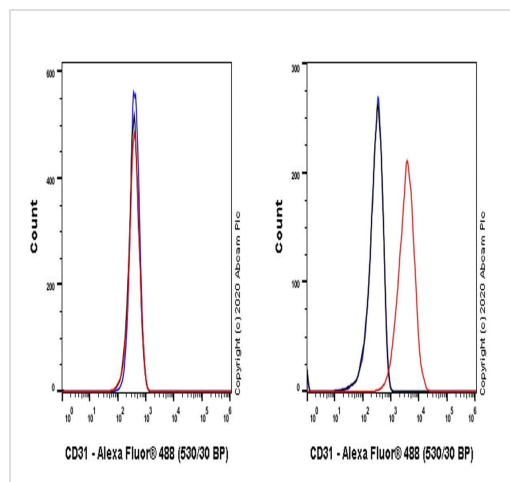
modifications

mechanical-force (stretch or pull) induced tyrosine phosphorylation.

Cellular localization

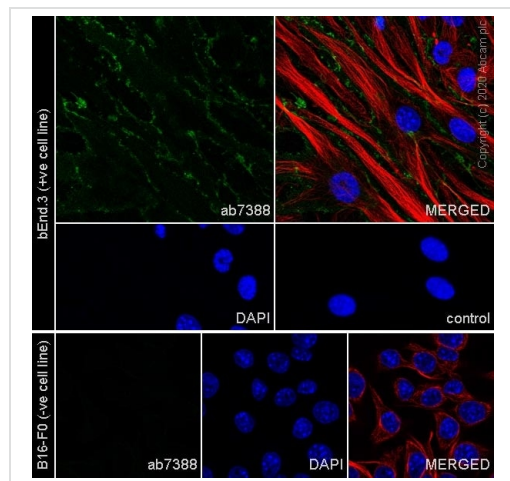
Membrane. Cell junction. Localizes to the lateral border recycling compartment (LBRC) and recycles from the LBRC to the junction in resting endothelial cells and Cell junction. Localizes to the lateral border recycling compartment (LBRC) and recycles from the LBRC to the junction in resting endothelial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

Images



Flow Cytometry - Anti-CD31 antibody [MEC 7.46] (ab7388)

Flow cytometric analysis of / fixed / permeabilized B16-F0 (Mouse melanoma epithelial cell-like, Left) / bEnd.3 (Mouse brain endothelioma, Right) cells labelling CD31 with ab7388 at 1/1000 dilution (0.1 µg) (Red) compared with a Rat monoclonal IgG (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat F(ab)₂ Anti-Rat IgG Fc (Alexa Fluor® 488, [ab150161](#)) at 1/2000 dilution was used as the secondary antibody. Negative control: B16-F0. Gated on viable cells.







Immunocytochemistry/ Immunofluorescence - Anti-CD31 antibody [MEC 7.46] (ab7388)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized bEnd.3 cells labelling CD31 with ab7388 at 1/50 (19.32 µg/ml) dilution, followed by [ab150157](#) Goat Anti-Rat IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing membranous staining in bEnd.3 cell line. Negative control: B16-F0 (PMID: 8082649) [ab179513](#) Anti-beta Tubulin rabbit monoclonal antibody was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is [ab150157](#) Goat Anti-Rat IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

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