

Product datasheet

Anti-CD31 antibody [EP3095] ab134168

Recombinant RabMAb

★★★★★ 7 Abreviews 36 References 9 Images

Overview

Product name	Anti-CD31 antibody [EP3095]
Description	Rabbit monoclonal [EP3095] to CD31
Host species	Rabbit
Specificity	This antibody gave positive results in mouse and rat tissue staining via IHC-P, but we have had difficulties obtaining consistent positive results in WB with mouse and rat samples. Thus, at this time we unfortunately cannot guarantee this antibody to recognize mouse and rat CD31, and optimization may be necessary when working with these species.
Tested applications	Suitable for: Flow Cyt (Intra), IHC-P, WB Unsuitable for: IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide within Human CD31 aa 700-800. The exact sequence is proprietary.
Positive control	Human tonsil and uterus tissues; THP1 and Jurkat whole cell lysate (ab7899).
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: <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 For more information see here . Our RabMAb [®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents .

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
Purity	Protein A purified

Clonality	Monoclonal
Clone number	EP3095
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab134168 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 (Intra)		1/100 - 1/1000. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
IHC-P	★★★★★ (3)	1/250 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 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
WB	★★★★☆ (2)	1/1000 - 1/10000. 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 be the same as predicted MWs in WB due to the different forms and modifications of CD31. Hu Isoform 1-6: 79-83 kDa (predicted)

Application notes Is unsuitable for IP.

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.

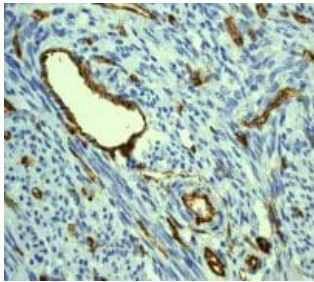
Post-translational modifications

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.

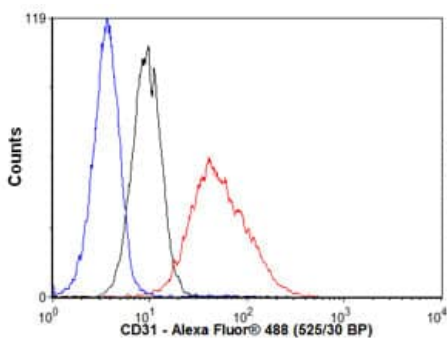
Images



Immunohistochemical analysis of paraffin-embedded Human uterus tissue, staining CD31 using ab134168 at a 1/250 dilution. Note membrane staining of endothelial cells.

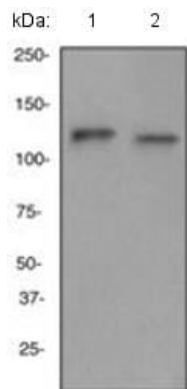
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD31 antibody [EP3095] (ab134168)



Flow Cytometry (Intracellular) - Anti-CD31 antibody [EP3095] (ab134168)

Overlay histogram showing Jurkat cells stained with ab134168 (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 (ab134168, 1/1000 dilution) 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 (monoclonal) (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.



Western blot - Anti-CD31 antibody [EP3095]
(ab134168)

All lanes : Anti-CD31 antibody [EP3095] (ab134168) at 1/1000 dilution

Lane 1 : THP1 cell lysate

Lane 2 : Jurkat cell lysate

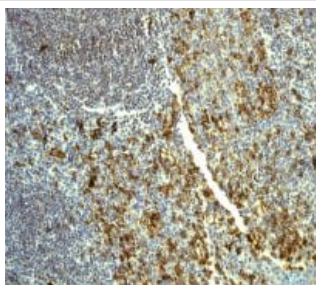
Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Standard HRP labelled goat anti-rabbit at 1/2000 dilution

Developed using the ECL technique.

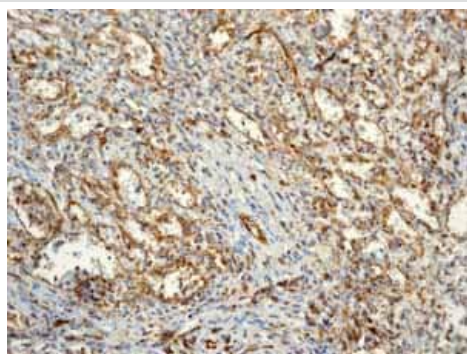
Predicted band size: 82 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD31 antibody [EP3095]
(ab134168)

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue, staining CD31 using ab134168 at a 1/250 dilution. Note membrane staining of endothelial cells.

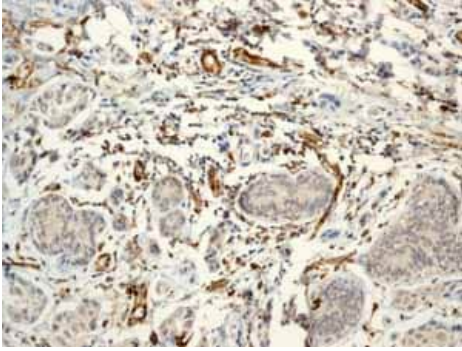
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD31 antibody [EP3095]
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Immunohistochemical analysis of paraffin embedded normal Human spleen vessels tissue using ab134168 showing +ve staining.

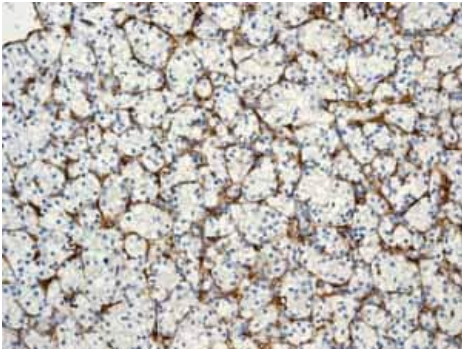
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD31 antibody [EP3095] (ab134168)

Immunohistochemical analysis of paraffin embedded Human Breast carcinoma vessels tissue using ab134168 showing +ve staining.

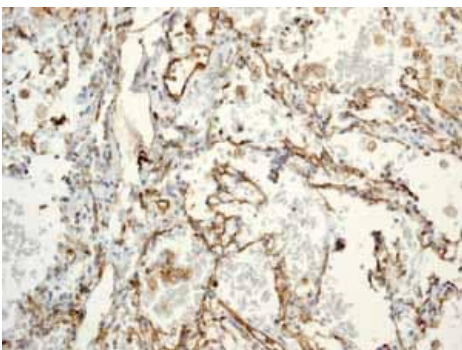
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD31 antibody [EP3095] (ab134168)

Immunohistochemical analysis of paraffin embedded Human Clear cell carcinoma of kidney tissue using ab134168 showing +ve staining.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD31 antibody [EP3095] (ab134168)

Immunohistochemical analysis of paraffin embedded normal Human lung tissue using ab134168 showing +ve staining.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

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 [EP3095] (ab134168)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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