


Product datasheet

Anti-CD31 antibody [TLD-3A12] ab64543

★★★★★ [7 Abreviews](#) [70 References](#) [3 Images](#)

Overview

Product name	Anti-CD31 antibody [TLD-3A12]
Description	Mouse monoclonal [TLD-3A12] to CD31
Host species	Mouse
Specificity	ab64543 recognises rat PECAM-1 (CD31). It also partially block the proliferative response of antigen-specific CD4+ T cells to antigen-presenting cells and relevant antigen.
Tested applications	Suitable for: IHC-Fr Unsuitable for: IHC-P
Species reactivity	Reacts with: Rat Predicted to work with: Pig, Rhesus monkey  Does not react with: Human
Immunogen	Tissue, cells or virus corresponding to Rat CD31. Activated, Lewis rat derived microglial cells
Positive control	Rat spleen; activated microglial cells.
General notes	<p>This antibody has been shown to partially block the proliferative response of antigen-specific CD4+ T cells to antigen-presenting cells and relevant antigen.</p> <p>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.</p> <p>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</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.
Storage buffer	pH: 7.40 Preservative: 0.1% Sodium azide Constituent: PBS

Purity	Immunogen affinity purified
Primary antibody notes	This antibody has been shown to partially block the proliferative response of antigen-specific CD4+ T cells to antigen-presenting cells and relevant antigen.
Clonality	Monoclonal
Clone number	TLD-3A12
Myeloma	Sp2
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab64543 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
IHC-Fr	★★★★★ (3)	1/10 - 1/100. A fixation with acetone or methanol is recommended. Do not fix with PFA.

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.

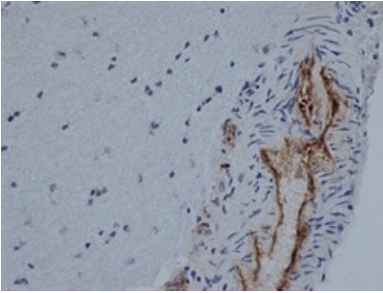
Post-translational modifications

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

Cellular localization

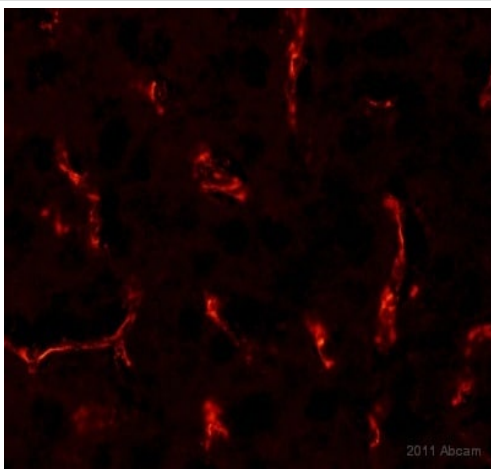
Membrane. Cell junction. Localizes to the lateral border recycling compartment (LBRC) and recycles from the LBRC to the junction in resting endothelial cells and Cell junction. Localizes to the lateral border recycling compartment (LBRC) and recycles from the LBRC to the junction in resting endothelial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

Images



Immunohistochemical staining of rat brain cryosection with Mouse anti Rat CD31 (ab64543)

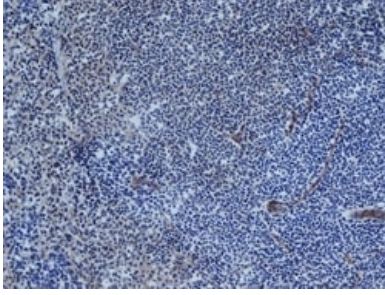
Immunohistochemistry (Frozen sections) - Anti-CD31 antibody [TLD-3A12] (ab64543)



ab64543 staining CD31 in rat brain tissue by Immunohistochemistry (Frozen sections). The sections were fixed in paraformaldehyde prior to blocking with 5% donkey serum, BSA 1%, Triton 1.5% for 2 hours at room temperature. The primary antibody was diluted 1/200 in PBS/5% Donkey serum and incubated with the sample for 12 hours at 4°C. An Alexa Fluor® 555-conjugated donkey anti-mouse polyclonal was used as the secondary antibody, diluted 1/200.

Immunohistochemistry (Frozen sections) - Anti-CD31 antibody [TLD-3A12] (ab64543)

This image is courtesy of Valley Lasry.



Immunohistochemical staining of rat spleen cryosection with Mouse anti Rat CD31 (ab64543)

Immunohistochemistry (Frozen sections) - Anti-CD31 antibody [TLD-3A12] (ab64543)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors