

## ARG22919 anti-CD31 antibody [TLD-3A12]

Package: 100 µg  
Store at: -20°C

### Summary

Product Description	Mouse Monoclonal antibody [TLD-3A12] recognizes CD31 Mouse anti Rat CD31 antibody, clone TLD-3A12 recognizes rat PECAM-1 (CD31), a 661 amino acid type 1 transmembrane protein expressed primarily on endothelial cells, platelets and leucocytes. Clone TLD-3A12 has been shown to partially block the proliferative response of antigen-specific CD4+ T cells to antigen-presenting cells and relevant antigen (Stevenson, K.S. et al. 2009). This clone has been reported as suitable for use in IHC on formalin-fixed paraffin-embedded sections pre-treated with 0.2M boric acid, pH7.0. (Wilson et al. 2007). Mouse anti Rat CD31, clone TLD-3A12 has been shown to be cross-reactive with endothelial cells derived from rhesus macaque (Maclean et al. 2001)
Tested Reactivity	Rat, Pig, R. Mk
Tested Application	ELISA, FACS, ICC/IF, IHC-Fr, WB
Host	Mouse
Clonality	Monoclonal
Clone	TLD-3A12
Isotype	IgG1
Target Name	CD31
Species	Rat
Immunogen	Activated, Lewis Rat derived microglial cells.
Conjugation	Un-conjugated
Alternate Names	EndoCAM; CD31/EndoCAM; PECAM-1; CD31; PECA1; CD antigen CD31; GPIIA <sup>1</sup> ; endoCAM; Platelet endothelial cell adhesion molecule

### Application Instructions

Application table	<table> <tr> <th>Application</th><th>Dilution</th></tr> <tr> <td>ELISA</td><td>Assay-dependent</td></tr> <tr> <td>FACS</td><td>1:10 - 1:100</td></tr> <tr> <td>ICC/IF</td><td>1:100</td></tr> <tr> <td>IHC-Fr</td><td>1:10 - 1:100</td></tr> <tr> <td>WB</td><td>Assay-dependent</td></tr> </table>	Application	Dilution	ELISA	Assay-dependent	FACS	1:10 - 1:100	ICC/IF	1:100	IHC-Fr	1:10 - 1:100	WB	Assay-dependent
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Application Note	<p>FACS: Use 10 µl of the suggested working dilution to label 10<sup>6</sup> cells in 100 µl.</p> <p>* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.</p>												

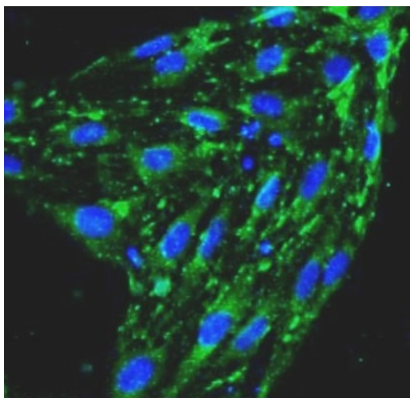
### Properties

Form	Liquid
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Purification	Purification with Protein A.
Buffer	PBS and 0.09% Sodium azide
Preservative	0.09% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

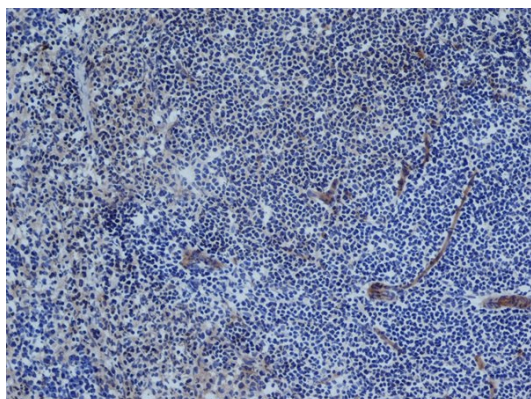
## Bioinformation

Gene Symbol	Pecam1
Gene Full Name	platelet/endothelial cell adhesion molecule 1
Background	CD31 protein is found on the surface of platelets, monocytes, neutrophils, and some types of T-cells, and makes up a large portion of endothelial cell intercellular junctions. The encoded protein is a member of the immunoglobulin superfamily and is likely involved in leukocyte migration, angiogenesis, and integrin activation. [provided by RefSeq, May 2010]
Function	<p>CD31 is a cell adhesion molecule which is required for leukocyte transendothelial migration (TEM) under most inflammatory conditions (PubMed:19342684, PubMed:17580308). 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 (PubMed:19342684). Trans-homophilic interaction may play a role in endothelial cell-cell adhesion via cell junctions (PubMed:27958302). Heterophilic interaction with CD177 plays a role in transendothelial migration of neutrophils (PubMed:17580308). Homophilic ligation of PECAM1 prevents macrophage-mediated phagocytosis of neighboring viable leukocytes by transmitting a detachment signal (PubMed:12110892). Promotes macrophage-mediated phagocytosis of apoptotic leukocytes by tethering them to the phagocytic cells; PECAM1-mediated detachment signal appears to be disabled in apoptotic leukocytes (PubMed:12110892). Modulates bradykinin receptor BDKRB2 activation (PubMed:18672896). Regulates bradykinin- and hyperosmotic shock-induced ERK1/2 activation in endothelial cells (PubMed:18672896). Induces susceptibility to atherosclerosis.</p> <p>Isoform Delta15: Does not protect against apoptosis. [UniProt]</p>
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Controls and Markers antibody; Developmental Biology antibody; Signaling Transduction antibody; Endothelial Cell Marker antibody; Microvascular Density Study antibody
Calculated Mw	83 kDa
PTM	Phosphorylated on Ser and Tyr residues after cellular activation. Phosphorylated on tyrosine residues by FER and FES in response to FCER1 activation (By similarity). In endothelial cells Fyn mediates mechanical-force (stretch or pull) induced tyrosine phosphorylation. Palmitoylation by ZDHHC21 is necessary for cell surface expression in endothelial cells and enrichment in membrane rafts.



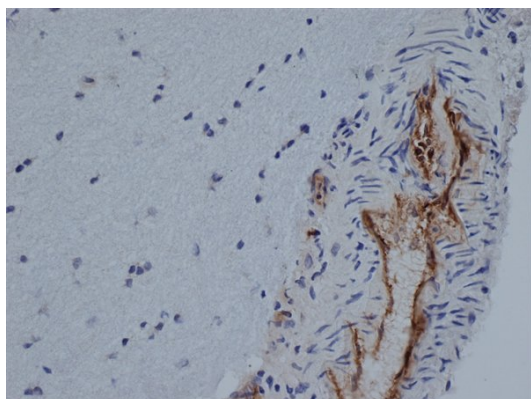
ARG22919 anti-CD31 antibody [TLD-3A12] ICC/IF image

Immunofluorescence: Rat BM-ECFCs stained with ARG22919 anti-CD31 antibody [TLD-3A12] at 1:100 dilution.



ARG22919 anti-CD31 antibody [TLD-3A12] IHC-Fr image

Immunohistochemistry: Rat spleen cryosection stained with ARG22919 anti-CD31 antibody [TLD-3A12].



ARG22919 anti-CD31 antibody [TLD-3A12] IHC-Fr image

Immunohistochemistry: Rat brain cryosection stained with ARG22919 anti-CD31 antibody [TLD-3A12].