

PRODUCT INFORMATION



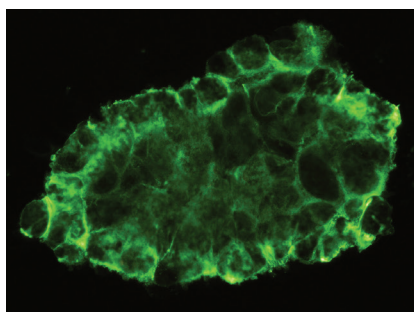
CD31 Rabbit Monoclonal Antibody (Clone 007)

Item No. 38094

Overview and Properties

Contents:	50 or 100 μ l of protein A-affinity purified monoclonal antibody
Synonyms:	Cluster of Differentiation 31, EndoCAM, GPIIA, PECA1, PECAM-1, Platelet Endothelial Cell Adhesion Molecule
Immunogen:	Recombinant human CD31
Cross Reactivity:	(+) CD31
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	\geq 1 year
Storage Buffer:	0.2 μ m filtered solution in PBS
Clone:	007
Host:	Rabbit
Isotype:	IgG
Applications:	Immunocytochemistry (ICC) and Immunofluorescence (IF); the recommended starting dilution is 1:20-1:100. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Immunofluorescent staining of human CD31 in HUVEC cells. Cells were fixed with 4% paraformaldehyde, blocked with 10% serum, and incubated with CD31 Rabbit Monoclonal Antibody (Clone 007) at a dilution of 1:60 at 37°C for one hour. Cells were stained with the Alexa Fluor® 488-conjugated Goat Anti-Rabbit IgG Secondary Antibody. Positive staining was localized to the cell membrane.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

CD31, also known as platelet endothelial cell adhesion molecule (PECAM-1), is a vascular cell adhesion molecule and member of the immunoglobulin superfamily of glycoproteins.¹ It is a transmembrane glycoprotein that contains a large extracellular domain with Ig homology domains and glycosaminoglycan binding sites, a membrane-spanning region, and a cytoplasmic domain containing multiple phosphorylation sites.^{1,2} CD31 is expressed on a variety of cells, including endothelial cells, monocytes, neutrophils, and platelets, among others.¹ It forms homophilic interactions, which allow it to aggregate at endothelial cell-cell junctions where it regulates vascular permeability.² Tyrosine phosphorylation at sites on the CD31 cytoplasmic domain, including at immunoreceptor tyrosine-based inhibitory motifs (ITIMs), recruits cytoplasmic proteins, leading to downstream signaling with either inhibitory or activating effects.³ CD31 also has roles in integrin-mediated adhesion, leukocyte recruitment, angiogenesis, and inflammation.^{2,4,5} High levels of CD31⁺ circulating cells positively correlate with C-reactive protein (CRP) levels and the Framingham risk score for hard coronary artery disease, while low levels on circulating cells negatively correlate with the Framingham risk score.⁶ A mutation in *PECAM1*, the gene encoding CD31, is associated with atherosclerotic cerebral infarction.⁷ Cayman's CD31 Rabbit Monoclonal Antibody (Clone 007) can be used for immunocytochemistry (ICC) and immunofluorescence (IF) applications.

References

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