

Product datasheet for **AM32852PU-T**

CD31 (PECAM1) Mouse Monoclonal Antibody [Clone ID: C31.3]

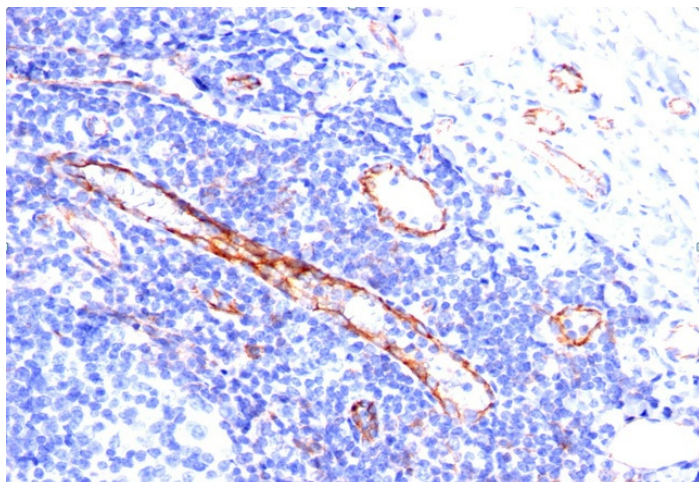
Product data:

Product Type:	Primary Antibodies
Clone Name:	C31.3
Applications:	ELISA, FC, IF, IHC, IP, WB
Recommended Dilution:	ELISA (For coating, Use Antibody without BSA). Western Blot: 0.5-1 µg/ml. Immunoprecipitation: 1-2 µg/500 µg protein lysate. Flow Cytometry: 0.5-1 µg/10 ⁶ cells. Immunofluorescence: 1-2 µg/ml. Immunohistochemistry on Frozen Sections: 0.5-1 µg/ml for 30 minutes at RT. Immunohistochemistry on Paraffin Sections: 0.5-1 µg/ml for 30 minutes at RT. Staining of formalin-fixed tissues requires boiling tissue sections in 1 mM EDTA, pH 8.0 for 10-20 min followed by cooling at RT for 20 min. Positive Control: Jurkat, CCRF-CEM or K-562 Cells. Tonsil, Angiosarcoma.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Human recombinant CD31 protein.
Specificity:	The CD31 (PECAM-1) antibody recognizes CD31 as an ~100 kDa band in endothelium and an ~130 kDa band in platelets (Parums, 1990). This monoclonal C31.3 Antibody (clone C31.3 or PECAM-1) is widely used as a pan-endothelial cell marker to demonstrate the presence of endothelial cells in tissue sections by immunohistochemistry. The CD31 (PECAM-1) antibody reacts with normal, benign, and malignant endothelium and has a number of practical applications including marking vessels and assessing tumor microvessel density (Giatromanolaki, 2012). Since malignant endothelium retains CD31 expression, the CD31 antibody is commonly used in antibody panels to determine or confirm tissue origin of a given tumor (Gratzinger, 2009). This can be particularly useful as it can otherwise be difficult to distinguish endothelial from other cell types in routine tissue sections solely by morphological features.

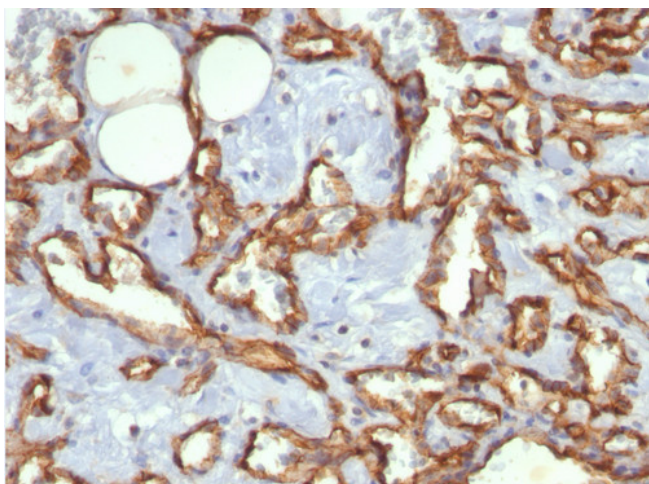


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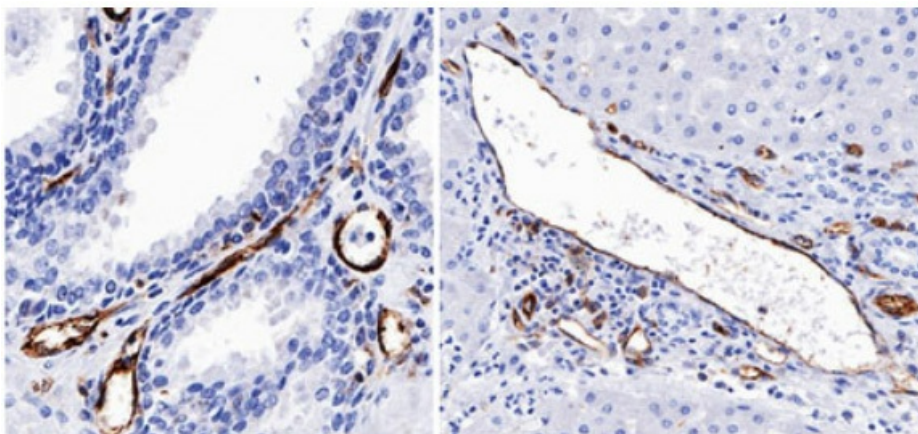
Formulation:	10mM PBS State: Purified State: Liquid purified IgG fraction from Bioreactor Concentrate Stabilizer: 0.05% BSA Preservative: 0.05% Sodium Azide
Concentration:	lot specific
Purification:	Protein A/G Chromatography
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~100 kDa (endothelium) and ~130 kDa (platelets)
Gene Name:	platelet and endothelial cell adhesion molecule 1
Database Link:	Entrez Gene 5175 Human P16284
Background:	<p>CD31 (PECAM-1) is a transmembrane glycoprotein member of the immunoglobulin supergene family of adhesion molecules, and plays key roles in leukocyte migration, angiogenesis, and integrin activation. CD31 is expressed on endothelial and hematopoietic (platelets, monocytes, macrophages, granulocytes, T and B lymphocytes, dendritic, bone marrow stem and adult) cells. The CD31 antibody stains these various cell types to various degrees (Parvens, 1990; Govender, 1997).</p> <p>Endothelial cells make up blood vessel lining, and angiogenesis refers to the growth of new blood vessels from pre-existing vessels. Pathological angiogenesis is associated with tumor growth and metastasis, and the CD31 antibody is useful for helping to confirm (CD31 / PECAM-1 antibody positive) or exclude (CD31 / PECAM-1 antibody negative) neoplastic angioinvasion (Jernman, 2012). The level of CD31 expression can help to determine the degree of tumor angiogenesis, and a high level of CD31 (PECAM-1) antibody staining may imply a rapidly growing tumor and potentially a predictor of tumor recurrence.</p>
Synonyms:	PECAM-1, EndoCAM, GPIIA'

Product images:

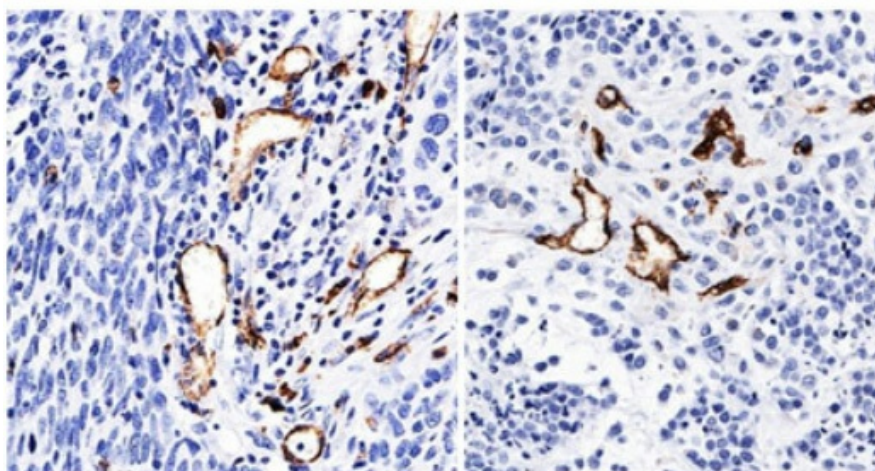
Formalin-Fixed, Paraffin-Embedded Human Angiosarcoma stained with CD31 Antibody (Clone 31.3).



Formalin-Fixed, Paraffin-Embedded Human tonsil stained with CD31 Antibody (Clone 31.3). Note membrane staining.



Formalin-Fixed, Paraffin-Embedded Human liver (left) and prostate tissue (right) stained with CD31 Antibody (Clone 31.3). Note membrane staining.



Formalin-Fixed, Paraffin-Embedded Human lung squamous cell carcinoma (left) and bladder transitional cell carcinoma (right) stained with CD31 Antibody (Clone 31.3). Note membrane staining.