

Anti-CD31

Catalog No.	Description
AM979-5M	6 ml of Ready-to-Use Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
AM979-10M	10 ml of Ready-to-Use Antibody in a barcode labeled vial for use with BioGenex Super Sensitive™ Detection Systems and i6000™ Automated Staining Systems
MU979-UC	1 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
MU979-5UC	0.5 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
AX979-YCD	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite Staining System, 160 tests
AX979-50D	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx® Elite Staining System, 50 tests
AX979-4M	Ready-to-Use Antibody in Barcode labeled vial for use on the NanoVIP® Staining System, 50 tests

Clone	Species	Ig Class
C31.3+C31.7+C31.10	Mouse	IgG1

Intended Use

For Research Use. This antibody is designed for the specific localization of human CD31 in formalin-fixed, paraffin-embedded (FFPE) tissue sections. Evaluation must be performed by a qualified pathologist.

Summary and Explanation

CD-31 is platelet and endothelial cell adhesion molecule 1 (also known as PECAM-1), part of the immunoglobulin super family, which is involved in leukocyte migration, angiogenesis and integrin activation. It is found on the surface of platelets, monocytes, neutrophils and some type of T-cells. CD31 has various roles in vascular biology including angiogenesis, platelet function, and thrombosis. Due to the positive correlation between CD-31 expression on monocytes and angiogenesis of tumors, immunohistochemical staining of CD-31 can prove as a useful tool to predict the possibility of metastatic tumor angiogenesis.

Storage and Handling

Store at 2-8°C. Fresh dilutions, if required, should be prepared prior to use and are stable and steady for up to one day at room temperature (20-26°C). Diluted antibody preparations can be refrigerated or frozen for extended shelf life.

Principles of the Procedure

Antigen detection by immunohistochemistry (IHC) is a two-step process wherein the primary antibody binds to the antigen of interest and that binding is detected by a chromogen. The [primary antibody](#) may be used in IHC using manual techniques or BioGenex Automated Staining System. Positive and negative controls should always be run simultaneously with all patient specimens.

Reagents Provided

Mouse Monoclonal Antibody to human CD31 is affinity purified and diluted in PBS, pH 7.2, containing 1% BSA and 0.09% sodium azide

Dilution of Primary Antibody

BioGenex Ready-to-Use antibodies have been optimized for use with the recommended BioGenex Detection System and should not require further dilution.

BioGenex concentrated antibodies must be diluted in accordance with the recommended protocol when used with the recommended BioGenex Detection System.

Recommended Protocol

Refer to the following table for conditions specifically recommended for this antibody. Refer to the BioGenex website for guidance on specific staining protocols or other requirements.

Parameter	BioGenex Recommendations
Control Tissue	Tonsil tissue as available with Biogenex FB-979M* & FG-979M*
Recommended Dilution for Concentrated Antibody	1:50 in HK941
Recommended Pretreatment (Manual/i6000)**	EZ-AR1 (HK521-XAK)
Recommended Pretreatment (Xmatrx & Nano VIP)	EZ-AR1 Elegance (HX031-YCD & HX046-08XN)
Antibody Incubation (Manual/i6000)	30-60 Min at RT
Antibody Incubation (Xmatrx & Nano VIP)	60 Min at 25°C
Detection System for Manual, Xmatrx, Nano VIP & i6000 systems***	Use BioGenex Two-Step OR One-Step Super Sensitive™ Polymer-HRP IHC Detection System/DAB; see p. 2 for more information

*FB: positive control micro chamber slides, FG: positive control non-barrier slides. Xmatrx & Nano VIP requires micro chamber slides.

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**Pretreatment times will vary based on individual microwave power.
 ***For automation systems (Xmatrix-Elite, Nano VIP & i6000 Diagnostics), refer to the factory protocols provided with the instrument.

Detection System	Two-Step HRP Kit	One-Step HRP Kit	Link and Label Kit
Manual	QD440-XAKEN (1000 Test)	QD630-XAKEN (1000 Test)	QP300-XAKE (1000 Test)
	QD430-XAKEN (1000 Test)		
	QD420-YIKEN (500 Test)	QD620-XAKEN (500 Test)	QP900-9LE (500 Test)
	QD400-60KEN (60 Test)		
Xmatrix - Automation	QD550-YCDEN (200 Test)	QD610-YADEN (200 Test)	N/A
NanoVIP- Automation	QD551-YCDEN (100 Test)	QD611-YADEN (100 Test)	N/A
i6000 - Automation	QD410-YAXEN (200 Test)	QD610-YAXEN (200 Test)	N/A
For more information, visit www.biogenex.com .			

Precautions

This product contains sodium azide at concentrations of less than 0.1%. Sodium azide is not classified as a hazardous chemical at the product concentrations, but proper handling protocols should be observed. For more information, a Safety Data Sheet (SDS) for sodium azide is available upon request. Dispose of unused reagents according to Local, State and Federal Regulations. Wear suitable Personal Protective Equipment, do not pipette reagents by mouth, and avoid contact of reagents and specimens with skin and mucous membranes. If reagents or specimens come in contact with sensitive area, wash with copious amounts of water.

Quality Control

Refer to BioGenex detection system documents for guidance on general quality control procedures.

Troubleshooting

Refer to the troubleshooting section in the documentation for BioGenex Detection Systems (or equivalent detection systems) for remedial actions on detection system related issues, or contact BioGenex Technical Support Department at 1-800-421-4149 or support@biogenex.com or your local distributor to report unusual staining.

Expected Results

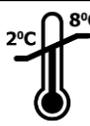
This antibody stains cytoplasm in positive cells in formalin-fixed, paraffin embedded tissue sections. An example image of a tissue section stained with this antibody can be found on the product page on the BioGenex website. Interpretation of the staining result is solely the responsibility of the user. Experimental results should be confirmed by a medically-established diagnostic product or procedure.

Limitations of the Procedure

Improper tissue handling and processing prior to immunostaining can lead to inconsistent results. Variations in embedding and fixation or the nature of the tissue may lead to variations in results. Endogenous peroxidase activity or pseudo peroxidase activity in erythrocytes and tissue biotin may result in non-specific staining based on the detection system employed. Tissues containing Hepatitis B Surface Antigen (HBsAg) may give false positive with horseradish peroxidase systems. Improper counterstaining and mounting may compromise the interpretation of results.

Bibliography

- Newman PJ et al. PECAM-1 (CD31) cloning and relation to adhesion molecules of the immunoglobulin gene superfamily. Science 1990 Mar;247(4947):1219-1222
- Sun-Jin Kim et al. Circulating Monocytes Expressing CD31: Implications for Acute and Chronic Angiogenesis. The American Journal of Pathology. May 2009; 174(5): 1972-1980.
- Giatromanolaki A. et al. Comparative evaluation of angiogenesis assessment with anti-factor-VIII and anti-CD31 immunostaining in non-small cell lung cancer. Clin Cancer Res. 1997 Dec; 3(12 Pt 1): 2485-92.
- DeLisser HM, Newman P, Albelda S et al. Molecular and functional aspects of PECAM-1/CD31. Trends in Immunology. 01 Oct 1994; 15(10): 450-495.
- Abraham V, et al. Involvement of TIMP-1 in PECAM-1-mediated tumor dissemination. Int J Oncol. 2018 Aug; 53(2):488-502.

	Temperature Limitation	RUO	Research Use only
	Use By Date	LOT	Batch Code
	Non-Sterile		Consult Instructions for Use
	Manufacturer,		

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