

CD31, Endothelial Cell; Clone JC/70A

Catalog Number	Format	Volume
A00009-0002	(Ready-To-Use)	2 ml
A00009-0007	(Ready-To-Use)	7 ml
A00009-0025	(Ready-To-Use)	25 ml
A00009-C.1	(Concentrate)	0.1 ml
A00009-C	(Concentrate)	1 ml

Intended Use

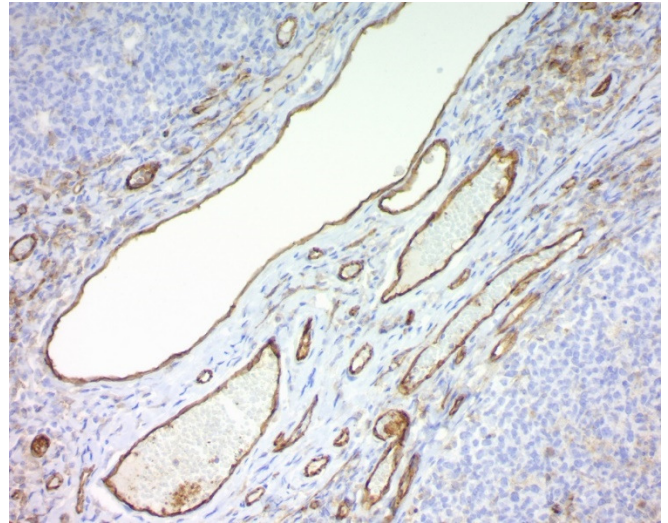
For Research Use Only. This antibody is intended for the qualitative visualization of the anatomical elements listed in the Specificity section. It is intended to be used within an Immunohistochemistry (IHC) procedure on formalin-fixed paraffin-embedded (FFPE) human tissue followed by visualization by light microscopy. Any diagnostic interpretation of the results of this antibody is to be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

Description

Titer/Working Dilution: Ready-to-Use: No further dilution required.

Concentrate: Suggested dilution is 1:200-400

Species:	Mouse
Immunogen:	Membrane preparation of a spleen from a patient with hairy cell leukemia.
Clone:	JC/70A
Isotype:	IgG1, Kappa.
Entrez Gene ID:	5175 (Human)
Hu Chromosome Loc.:	17q23.3
Synonyms:	EndoCAM; PECA1; Platelet Endothelial Cell Adhesion Molecule 1; GPIIA'
Mol. Wt. of Antigen:	~100kDa (endothelium) and ~130kDa (platelets)
Format:	Ready-To-Use antibody has been preterited and quality controlled to work on formalin-fixed paraffin-embedded as well as acetone fixed cryostat tissue sections. No further titration is required. Concentrate antibody is provided at 200µg/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% Sodium Azide.
Specificity:	Anti-CD31 has shown to be highly specific and sensitive for vascular endothelial cells. Staining of nonvascular tumors (excluding hematopoietic neoplasms) is rare. Anti-CD31 reacts with normal, benign, and malignant endothelial cells which make up blood vessel lining.
Background:	CD31 (PECAM-1) is a transmembrane glycoprotein member of the immunoglobulin supergene family of adhesion molecules. CD31 is expressed by stem cells of the hematopoietic system and is primarily used to identify and concentrate these cells for experimental studies as well as for bone marrow transplantation. The level of CD31 expression can help to determine the degree of tumor angiogenesis, and a high level of CD31 expression may imply a rapidly growing tumor and potentially be a predictor of tumor recurrence.
Species Reactivity:	Human, Cynomolgus Monkey, and Rabbit. Does not work with Rat or Pig. Others-not known
Positive Control:	Tonsil, Angiosarcoma, THP-1 or Jurkat cells.
Cellular Localization:	Cell Surface and Cytoplasmic
Microbiological State:	Nonsterile.



Human tonsil stained using CD31, Endothelial Cell; Clone JC/70A. Pretreatment with Citrate Plus HIER Solution 5 minutes, PolyTek Anti-Mouse Polymerized HRP and DAB Chromogen/Substrate (High Contrast). Counterstained with Hematoxylin, Mayer's (Lillie's Modification). Final magnification 200X.

Materials and Reagents Required but not Provided

- Control tissue and reagents
- Xylene, graded alcohols, and deionized/distilled water
- Antibody Diluent.
- IHC detection system. Suggested: ScyTek Cat# ABZ125 "CRF Anti-Polyvalent HRP Polymer" and ScyTek Cat# ACV500 "DAB Chromogen/Substrate Kit (High Contrast)".
- Wash buffer for rinses (ScyTek Cat# TBT500)
- HIER Retrieval Solution
- Hematoxylin counterstain and bluing reagent (ScyTek Cat# HMM500 and BRT500)
- Mounting medium and coverslips


Note: ScyTek Laboratories has a wide range of IHC reagents and ancillaries that can be found at scytek.com.

Procedure

- Tissue Section Pretreatment (Required):** Staining of formalin fixed, paraffin embedded tissue sections is significantly enhanced by pretreatment with Citrate Plus (catalog# CPL) or pH 9 HIER Solution (see ScyTek catalog# TES for instructions).
- Primary Antibody Incubation Time:** We suggest an incubation period of 30 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user.
- Visualization:** For maximum staining intensity we recommend the "CRF Anti-Polyvalent HRP Polymer" (ScyTek catalog# ABZ125, see IFU for instructions) combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).

Storage and Stability

Do not Freeze. Store at 2-8°C. Return to 2-8° immediately after use. Do not use after expiration date printed on label. Verify visually that antibody has not been contaminated before use. Do not use if reagent becomes cloudy or precipitates.

Storage: 2° C  8° C

Limitations

Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used. This data sheet's recommendations and procedures were validated using ScyTek IHC reagents and may not be suitable for other detection systems.

Precautions

1. Contains Sodium Azide as a preservative (0.09% w/v), do not ingest. Sodium Azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.
2. Do not pipette by mouth.
3. Avoid contact of reagents and specimens with skin and mucous membranes.
4. Avoid microbial contamination of reagents or increased nonspecific staining may occur.
5. The user must validate any procedures and recommendations that differ from this data sheet.
6. The SDS may be found at scytek.com

References

1. Mbagwu SI, Filgueira L. Differential expression of CD31 and Von Willebrand Factor on endothelial cells in different regions of the human brain: potential implications for cerebral malaria pathogenesis. *Brain sciences*. 2020 Jan;10(1):31.
2. Tamma R, Annese T, Ruggieri S, Brunetti O, Longo V, Cascardi E, Mastropasqua MG, Maiorano E, Silvestris N, Ribatti D. Inflammatory cells infiltrate and angiogenesis in locally advanced and metastatic cholangiocarcinoma. *European journal of clinical investigation*. 2019 May;49(5):e13087.
3. Schöneberg J, De Lorenzi F, Theek B, Blaeser A, Rommel D, Kuehne AJ, Kießling F, Fischer H. Engineering biofunctional in vitro vessel models using a multilayer bioprinting technique. *Scientific reports*. 2018 Jul 11;8(1):1-3.
4. Connolly JM, Rose DP. Enhanced angiogenesis and growth of 12-lipoxygenase gene-transfected MCF-7 human breast cancer cells in athymic nude mice. *Cancer letters*. 1998 Oct 23;132(1):107-12.
5. Connolly JM, Rose DP. Angiogenesis in two human prostate cancer cell lines with differing metastatic potential when growing as solid tumors in nude mice. *The Journal of urology*. 1998 Sep 30;160(3):932-6.
6. Gratzinger D et. al. *Am J Clin Pathol* 131:264-278 (2009).

Warranty

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Storage: 2° C



8° C

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