

CD31; Clone C31.7

Catalog Number	Format	Volume
A00110-0002	(Ready-To-Use)	2 ml
A00110-0007	(Ready-To-Use)	7 ml
A00110-0025	(Ready-To-Use)	25 ml
A00110-C	(Concentrate)	1 ml

Intended Use

For In-Vitro Diagnostic Use. 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.

Description

Titer/Working Dilution: Ready-to-Use: No further dilution required.
Concentrate: Suggested dilution is 1:50-100

Species: Mouse

Immunogen: Membrane preparation of a spleen from a patient with hairy cell leukemia was used as immunogen for this antibody.

Clone: C31.7

Isotype: IgG1, Kappa

Format: Ready-To-Use antibody has been pre-titrated 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 in a phosphate buffered saline containing 1% BSA.

Specificity: This antibody recognizes a 100kDa glycoprotein in endothelial cells and 130kDa in platelets. This antibody reacts with endothelial cells in normal tissues and in benign and malignant proliferations. In cryostat sections and blood smears the antibody also stains megakaryocytes, platelets and occasionally plasma cells. It reacts weakly with mantle zone B cells, peripheral T cells, and neutrophils. Antibody to CD31 is of value in the study of benign and malignant vascular tumors. Staining for CD31 has also been used to measure angiogenesis, which reportedly predicts tumor recurrence.

Background: CD31 (PECAM-1, or platelet endothelial cell adhesion molecule-1) is a surface protein expressed by endothelial cells, monocytes, platelets, granulocytes, and lymphocyte subsets, and makes up a large portion of endothelial intercellular junctions. CD31 is a member of the immunoglobulin superfamily and is likely involved in leukocyte migration, angiogenesis, and integrin activation. Reports indicate that CD31 interacts with CD38 and is involved in cellular interactions resulting in wound healing and angiogenesis. Expression of CD31 on CD4+ T lymphocytes, helps to control T lymphocyte activation, because in the absence of CD31, T cells have a greater propensity to become activated, resulting in increased susceptibility to become apoptotic. This impact of CD31 loss becomes most pronounced during severe, inflammatory, and immunological stresses such as those caused by systemic Salmonella infection. This identifies a novel role for CD31 in regulating CD4 T homeostasis.

Species Reactivity: Human. Others not known.

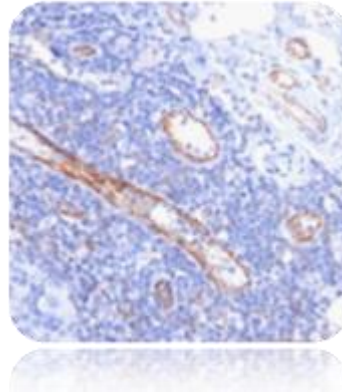
Positive Control: Tonsil

Cellular Localization: Primary Membrane.

Microbiological State: Nonsterile

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 (Highly Recommended):** Staining of formalin fixed paraffin embedded tissue sections is significantly enhanced by pretreatment with Tis-EDTA HIER Solution (10x) pH 9.0 (ScyTek catalog# TES500) or Citrate Plus (10x) HIER Solution (ScyTek catalog# CPL500)
- 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 "UltraTek HRP Anti-Polyvalent Lab Pack" (ScyTek catalog# UHP125, 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.

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

Storage: 2° C  8° C

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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. Schmidt D; von Hochstetter AR. Pathology, Research and Practice, 191(5):410-414 (1995).
2. Sciôt R; Delaere P; Van Damme B; Desmet V. Histopathology, 26(2):177-180 (1995).
3. Charpin C; Devictor B; Bergeret D; Andrac L; Boulat J; Horschowski N; Lavaut MN; Piana L. American Journal of Clinical Pathology, 103(4):443-448 (1995).
4. Bossi P; Viale G; Lee AK; Alfano R; Coggi G; Bosari S. Cancer Research, 55(21):5049-5053 (1995).
5. Newton-Nash DK, Newman PJ. J Immunol, 163: 682-688 (1999).
6. Ross EA, Coughlan RE, Flores-Langarica A, et al. J Immunol. 187(4):1553-1565 (2011).

Warranty

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