

ANTI-ALK (CLONE: ABM43C4)

CATALOG ID	DESCRIPTION
MM001-3D, 6D	3.0mL and 6.0mL RTU
MM001-AA, CC	0.2mL and 1.0mL Conc.

ALTERNATIVE NAME	ACVRL1, ACVRLK1, ALK1
CLONE	ABM43C4
SPECIES	Mouse
ISOTYPE	Mouse IgG1 Kappa
TISSUE CONTROL	Anaplastic large cell Lymphoma
EPITOPE/ IMMUNOGEN	ALK
CELL LOCALIZATION	Membrane
SPECIES REACTIVITY	Human
DILUTION RANGE	Assay dependent
DILUENT	Antibody Diluent Standard
<i>Supplied as Buffer with protein carrier & preservative</i>	

INTENDED USE

BioMarq ALK antibody is used for *in vitro* diagnostic use only. This antibody is designed for the specific identification of ALK protein in formalin-fixed paraffin-embedded tissue sections. The results using this product should be interpreted by a qualified pathologist in conjunction with the patient's relevant clinical history, other diagnostic tests and proper controls.

PRODUCT DESCRIPTION

The ALK-1 or Activin receptor-like kinase-1 is a type I cell surface receptor for the TGF-beta (transforming growth factor-beta) super family of proteins. It is expressed predominantly in endothelial cells with moderate expression in smooth muscle cells, myofibroblast, hepatic stellate cells, chondrocytes, monocytes, myoblasts, macrophages and fibroblasts. ALK-1 plays a pivotal role in vascular remodelling and angiogenesis. More specifically its key function is in arterial/venous differentiation during embryonic vascular development.

PRINCIPLE OF PROCEDURE

Immunohistochemistry (IHC) is a method for detecting antigens or haptens in cells of a tissue section by exploiting the principle of antibodies binding specifically to antigens in biological tissues. The antibody-antigen binding can be visualized in different methods. Enzymes, such as Horseradish Peroxidase (HRP) or Alkaline Phosphatase (AP), are commonly used to catalyze a color-producing reaction. IHC is widely used technique which makes it possible to visualize the distribution and localization of specific cellular components within cells and in proper tissue context. There are numerous IHC methods that can be used to localize antigens. The method selected should include consideration of parameters such as the specimen types and assay sensitivity.

STORAGE AND STABILITY

Store at 2-8°C. Do not freeze. Not to be used beyond the expiration date prescribed on label.

IHC RECOMMENDED PROTOCOL

DeParaffinization & Hydration: DeParaffinization & Hydration is done using two grades of xylene & ethanol. Rinse in distilled water & follow next steps given

Pretreatment Solution: Perform heat Retrieval using BioMarq's Epitope Retrieval 1 (Catalog No PS001). (Refer to BioMarq's Epitope Retrieval 1 datasheet for specific instructions).

Peroxide Block: Incubate for 10 minutes with BioMarq EP Block (Catalog No BR001).

Protein Block (Optional): Incubate for 5-10 minutes at RT with BioMarq Protein Block (Catalog No BR002).

Primary Antibody: Incubate with Anti-ALK antibody (Catalog No MM001) for 30-60 minutes at RT.

Probe: Incubate for 20 minutes at RT with a BioMarq Histochemistry probe (Catalog No HP001).

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Secondary Antibody: Incubate for 20 minutes at RT with a BioMarq Polymer HRP Antibody (Catalog No SA001).

Substrate/Chromogen: Incubate sections in DAB working solution for 5-7 minutes.

Counterstain: Stain with BioMarq Mayer's Hematoxylin solution (Catalog No CS001) for 3-5min.

Mounting Solution: Mount the slides with BioMarq XY-Mount (Catalog No MS002) or using BioMarq T-Mount (Catalog No MS003).

TECHNICAL NOTE

This antibody staining has been standardized with BioMarq **IHC DETECTION KIT** (Catalog No DA001).

Ensure after each step slides are washed with BioMarq Immuno Wash Standard (Catalog No WB001) except peroxide Block step. Follow the instructions in the wash buffer data sheet for 1X solution preparation.

Follow the Antibody specific protocol recommendations provided in the data sheet. If atypical results occur, contact BioMarq Technical Support at 040-29702960.

QUALITY CONTROL

For Quality Control purpose, each lot of this antibody is tested by immunohistochemistry using, formalin-fixed, paraffin-embedded **Anaplastic large cell Lymphoma & Inflammatory myofibroblastic tumor** biopsy as control tissue. Users can also procure the Qualified Positive Control Slides available from BioMarq for their Quality Control purpose.

PRECAUTIONS

The material contains 0.05% Sodium azide as preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material.

Specimens should be handled carefully before and after the assay to avoid transmission of infection and disposed of with proper precautions

Microbial contamination of reagents may yield nonspecific staining.

For detailed safety information related to BioMarq Products, please refer to appropriate safety data sheets (SDS) available online at www.biomarq.net

LIMITATIONS

Factors which affect Immunohistochemical staining include the fixation process, Epitope-retrieval method, incubation times, tissue section thickness and detection kit used. Detection systems other than recommended by BioMarq when used results may vary due to the varied sensitivity of reagents and recommended incubation times. The recommendations and protocols mentioned in the datasheet are based on exclusive use of BioMarq products. Ultimately, it is the responsibility of the investigator to determine optimal conditions. The clinical interpretation of any positive or negative staining should be evaluated within the context of clinical presentation, morphology and other histopathological criteria by a qualified pathologist.

REFERENCES

1. R. E. Hutchison et al, Use of an anti-ALK antibody in the characterization of anaplastic large-cell lymphoma of childhood, *Annals of Oncology*, 1997 January.
2. David Y. Mason et al, Nucleolar Localization of the Nucleophosmin-Anaplastic Lymphoma Kinase Is Not Required for Malignant Transformation, *Cancer research* 58, 1998 March.