

Monoclonal Antibody CD246

PN IM3312 – Purified – Liquid 1 mL – 0.2 mg – Clone ALKc

For Research Use Only. Not for use in diagnostic procedures.

SPECIFICITY

CD246 also called ALK (Anaplastic Lymphoma Kinase; neural tyrosine kinase) is a 200 kDa transmembrane molecule expressed only in neural tissues (weakly) and by the rhabdomyosarcoma Rh30 cell line (1). The ALK gene is beared by chromosome 2. Upon translocation between chromosome 2 and chromosome 5 (t(2;5)), the ALK gene fuses with the nucleophosmin (NPM) gene. NPM, also known as B23, is an ubiquitous nucleolar phosphoprotein involved in the transport of pre-ribosomal components between the nucleolus and the cytoplasm. The chimeric product resulting from t(2;5) translocation is a protein of 80 kDa with the N-terminal portion of NPM linked to the complete intracellular portion of ALK. Karpas 299 and SU-DHL-1 lymphoid cell lines strongly express NPM-ALK.

The ALKc monoclonal antibody reacts with the normal ALK protein as well as with the chimeric protein ALK-NPM (2). ALKc, directed against the cytoplasmic portion of ALK, labels a 200 kDa band on Western blots of Rh30 cells, and a 80 kDa band on Western blots of Karpas 299 cells (2). On fixed, paraffin-embedded tissue sections, ALKc specifically labels t(2,5)-positive cells giving a strong and diffuse cytoplasmic positivity, often associated with a nucleolar staining (2).

REAGENT

Monoclonal Antibody CD246
PN IM3312 – Purified – Liquid 1mL

Clone	ALKc
Isotype	IgG1
Immunogen	NPM – ALK recombinant protein
Hybridoma	NS1 x Balb/c
Species	Mouse
Source	ascites fluid
Purification	Protein A affinity chromatography

REAGENT CONTENTS

2 mg/mL bovine serum albumin in phosphate-buffered saline and 0.1% sodium azide as preservative.

STATEMENT OF WARNINGS

1. This reagent contains 0.1% sodium azide. Sodium azide under acid

conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.

2. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
4. Do not use reagent beyond the expiration date on the vial label.
5. Avoid microbial contamination of reagent or erroneous results may occur.
6. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date on the vial label when stored at 2 – 8°C. Minimize exposure to light and warmth.

REAGENT PREPARATION

No reconstitution is necessary.

APPLICATIONS

Immunohistochemistry on frozen or fixed, paraffin-embedded tissue sections (3, 4). Fixed, paraffin-embedded tissue sections require a heating treatment prior to incubation with the antibody. Western blotting (4).

For each application, it is recommended to establish the right range of antibody dilutions to be used for the experiment.

SELECTED RESEARCH REFERENCES

1. Pulford, K., Lamant, L., Morris, S.W., Butler, L.H., Wood, K.M., Stroud, D., Delsol, G., Mason, D.Y., "Detection of anaplastic lymphoma kinase (ALK) and nucleolar protein nucleophosmin (NPM)-ALK proteins in normal and neoplastic cells with the monoclonal

antibody ALK1", 1997, *Blood*, 89, 1394-1404.

2. Falini, B., Bigerna, B., Fizzotti, M., Pulford, K., Pileri, S.A., Delsol, G., Carbone, A., Paulli, M., Magrini, U., Menestrina, F., Giardini, R., Pilotti, S., Mezzelani, A., Ugolini, B., Billi, M., Pucciarini, A., Pacini, R., Pellicci, P-G., Flenghi, L., "ALK expression defines a distinct group of T/Null lymphomas ("ALK lymphomas") with a wide morphological spectrum", 1998, *Am. J. Pathol.*, 153, 875-886.
3. Shi, S.R., Key, M.E., Kalra, K.L., "Antigen retrieval in formalin-fixed, paraffin-embedded tissues: an enhancement method for immunohistochemical staining based on microwave oven heating of tissue section", 1991, *J. Histochem. Cytochem.*, 6, 39, 741-748.
4. Miller, K., Auld, J., Jessup, E., Rhodes, A., Ashton-Key, M., "Antigen unmasking in formalin-fixed routinely processed paraffin wax-embedded sections by pressure cooking: A comparison with a microwave oven heating and traditional methods", 1995, *Adv. Anat. Pathol.*, 1, Ed., Raven Press, 2, 60-64.

PRODUCT AVAILABILITY

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For additional information in the USA, call 800-526-7694.

Outside the USA, contact your local Beckman Coulter representative.

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