

ALK (ALK1): sc-53157

BACKGROUND

LTK, ALK and Ros have been identified as receptor tyrosine kinases having sequence similarity to the Insulin receptor subfamily of kinases. LTK, leukocyte tyrosine kinase, is expressed in murine B lymphocyte precursors and has also been found in forebrain neurons. ALK, anaplastic lymphoma kinase, is normally highly expressed specifically in the nervous system. A truncated form containing the catalytic domain of ALK is expressed as the result of a translocation occurring in many non-Hodgkin's lymphomas. The c-Ros gene was originally identified in mutant form as an oncogene. Ros is normally expressed in a small number of epithelial cell types and may play a role in epithelial development.

REFERENCES

1. Birchmeier, C., et al. 1990. Characterization of ROS1 cDNA from a human glioblastoma cell line. *Proc. Natl. Acad. Sci. USA* 87: 4799-4803.
2. Haase, V.H., et al. 1991. Alternatively spliced ltk mRNA in neurons predicts a receptor with a larger putative extracellular domain. *Oncogene* 6: 2319-2325.
3. Morris, S.W., et al. 1994. Fusion of a kinase gene, ALK, to a nucleolar protein gene, NPM, in non-Hodgkin's lymphoma. *Science* 263: 1281-1284.
4. Kanwar, Y.S., et al. 1995. Cloning of mouse c-Ros renal cDNA, its role in development a relationship to extracellular matrix glycoproteins. *Kidney Int.* 48: 1646-1659.
5. Ueno, H., et al. 1996. Growth and survival signals transmitted via two distinct NPXY motifs within leukocyte tyrosine kinase, an Insulin receptor-related tyrosine kinase. *J. Biol. Chem.* 271: 27707-27714.
6. Iwahara, T., et al. 1997. Molecular characterization of ALK, a receptor tyrosine kinase expressed specifically in the nervous system. *Oncogene* 14: 439-449.
7. Pulford, K., et al. 1997. Detection of anaplastic lymphoma kinase (ALK) and nucleolar protein nucleophosmin (NPM)-ALK proteins in normal and neoplastic cells with the monoclonal antibody ALK1. *Blood* 89: 1394-1404.

CHROMOSOMAL LOCATION

Genetic locus: ALK (human) mapping to 2p23.2.

SOURCE

ALK (ALK1) is a mouse monoclonal antibody raised against amino acids 419-520 of ALK of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ALK (ALK1) is recommended for detection of ALK of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for ALK siRNA (h): sc-40083, ALK shRNA Plasmid (h): sc-40083-SH and ALK shRNA (h) Lentiviral Particles: sc-40083-V.

Molecular Weight of ALK precursor: 176 kDa.

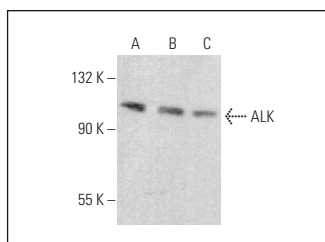
Molecular Weight of B23-ALK fusion protein: 80 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or Raji whole cell lysate: sc-364236.

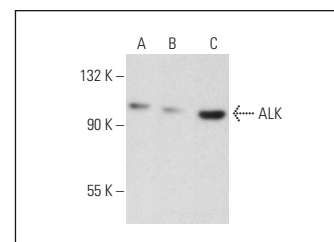
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ALK (ALK1): sc-53157. Western blot analysis of ALK expression in Raji (A), K-562 (B) and Jurkat (C) whole cell lysates.



ALK (ALK1): sc-53157. Western blot analysis of ALK expression in Raji (A), IMR-32 (B) and SJRH30 (C) whole cell lysates.

RESEARCH USE

This antibody is covered under U.S. Patent No. 6,696,548 and is for research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **ALK (F-12): sc-398791** for ALK antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.