

# p-ALK (Tyr 1586): sc-109905

## BACKGROUND

LTK, Ros and ALK 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. 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. ALK (anaplastic lymphoma kinase) is a 1630 amino acid protein that 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. ALK phosphorylates almost exclusively at the first tyrosine of the Y-x-x-x-Y-Y motif.

## 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. Sonnenberg-Riethmacher, E., et al. 1996. The c-Ros tyrosine kinase receptor controls regionalization and differentiation of epithelial cells in the epididymis. *Genes Dev.* 10: 1184-1193.
7. Iwahara, T., et al. 1997. Molecular characterization of ALK, a receptor tyrosine kinase expressed specifically in the nervous system. *Oncogene* 14: 439-449.

## CHROMOSOMAL LOCATION

Genetic locus: ALK (human) mapping to 2p23.2; Alk (mouse) mapping to 17 E1.3.

## SOURCE

p-ALK (Tyr 1586) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 1586 phosphorylated ALK of human origin.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109905 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p-ALK (Tyr 1586) is recommended for detection of Tyr 1586 phosphorylated ALK of human origin and correspondingly phosphorylated Tyr 1582 of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-ALK (Tyr 1586) is also recommended for detection of correspondingly phosphorylated ALK in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for ALK siRNA (h): sc-40083, ALK siRNA (m): sc-40084, ALK shRNA Plasmid (h): sc-40083-SH, ALK shRNA Plasmid (m): sc-40084-SH, ALK shRNA (h) Lentiviral Particles: sc-40083-V and ALK shRNA (m) Lentiviral Particles: sc-40084-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.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.