

ALK Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7600C

Specification

ALK Antibody (Center) - Product Information

Application	WB, IHC-P,E
Primary Accession	O9UM73
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	176442
Antigen Region	636-666

ALK Antibody (Center) - Additional Information

Gene ID 238

Other Names

ALK tyrosine kinase receptor, Anaplastic lymphoma kinase, CD246, ALK

Target/Specificity

This ALK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 636-666 amino acids from the Central region of human ALK.

Dilution

WB~~1:1000
IHC-P~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

ALK Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

ALK Antibody (Center) - Protein Information

Name ALK {ECO:0000303|PubMed:9174053, ECO:0000312|HGNC:HGNC:427}

Function Neuronal receptor tyrosine kinase that is essentially and transiently expressed in specific regions of the central and peripheral nervous systems and plays an important role in the

genesis and differentiation of the nervous system (PubMed:[11121404](#), PubMed:[11387242](#), PubMed:[16317043](#), PubMed:[17274988](#), PubMed:[30061385](#), PubMed:[34646012](#), PubMed:[34819673](#)). Also acts as a key thinness protein involved in the resistance to weight gain: in hypothalamic neurons, controls energy expenditure acting as a negative regulator of white adipose tissue lipolysis and sympathetic tone to fine-tune energy homeostasis (By similarity). Following activation by ALKAL2 ligand at the cell surface, transduces an extracellular signal into an intracellular response (PubMed:[30061385](#), PubMed:[33411331](#), PubMed:[34646012](#), PubMed:[34819673](#)). In contrast, ALKAL1 is not a potent physiological ligand for ALK (PubMed:[34646012](#)). Ligand-binding to the extracellular domain induces tyrosine kinase activation, leading to activation of the mitogen-activated protein kinase (MAPK) pathway (PubMed:[34819673](#)). Phosphorylates almost exclusively at the first tyrosine of the Y-x-x-x-Y-Y motif (PubMed:[15226403](#), PubMed:[16878150](#)). Induces tyrosine phosphorylation of CBL, FRS2, IRS1 and SHC1, as well as of the MAP kinases MAPK1/ERK2 and MAPK3/ERK1 (PubMed:[15226403](#), PubMed:[16878150](#)). ALK activation may also be regulated by pleiotrophin (PTN) and midkine (MDK) (PubMed:[11278720](#), PubMed:[11809760](#), PubMed:[12107166](#), PubMed:[12122009](#)). PTN-binding induces MAPK pathway activation, which is important for the anti-apoptotic signaling of PTN and regulation of cell proliferation (PubMed:[11278720](#), PubMed:[11809760](#), PubMed:[12107166](#)). MDK-binding induces phosphorylation of the ALK target insulin receptor substrate (IRS1), activates mitogen-activated protein kinases (MAPKs) and PI3-kinase, resulting also in cell proliferation induction (PubMed:[12122009](#)). Drives NF-kappa-B activation, probably through IRS1 and the activation of the AKT serine/threonine kinase (PubMed:[15226403](#), PubMed:[16878150](#)). Recruitment of IRS1 to activated ALK and the activation of NF-kappa-B are essential for the autocrine growth and survival signaling of MDK (PubMed:[15226403](#), PubMed:[16878150](#)).

Cellular Location

Cell membrane; Single-pass type I membrane protein Note=Membrane attachment is essential for promotion of neuron-like differentiation and cell proliferation arrest through specific activation of the MAP kinase pathway.

Tissue Location

Expressed in brain and CNS. Also expressed in the small intestine and testis, but not in normal lymphoid cells

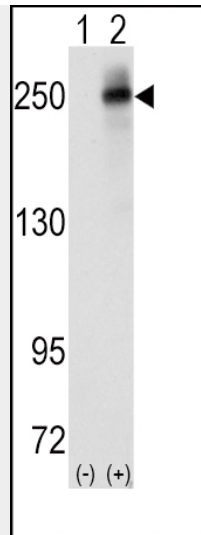
ALK Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

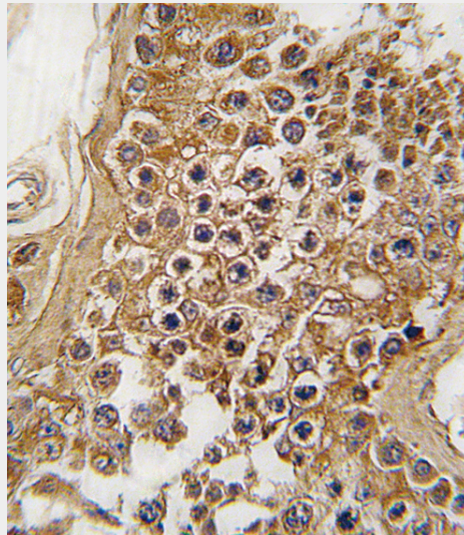
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

ALK Antibody (Center) - Images





Western blot analysis of ALK(Center)(arrow) using rabbit polyclonal ALK(Center) Antibody (Cat.#AP7600c).293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the ALK (Center) gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human testis tissue reacted with ALK antibody (Center) (Cat.#AP7600c), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

ALK Antibody (Center) - Background

ALK, a member of the insulin receptor subfamily of Tyr protein kinases, is an orphan receptor. It appears to play an important role in the normal development and function of the nervous system. This Type I membrane protein is expressed in brain and CNS and in the small intestine and testis, but not in normal lymphoid cells. A form of non-Hodgkin's lymphoma is characterized by a chromosomal translocation $t(2;5)(p23;q35)$ that involves NPM1 and ALK. The protein contains 1 LDL-receptor class A domain and 2 putative MAM domains.

ALK Antibody (Center) - References

Morris, S.W., et al., *Oncogene* 14(18):2175-2188 (1997).
Iwahara, T., et al., *Oncogene* 14(4):439-449 (1997).

Morris, S.W., et al., Science 263(5151):1281-1284 (1994).
Morris, S.W., et al., Oncogene 15, 2883-2883 (1997).