

## Anti-ALK Antibody Picoband®

Catalog Number: PA1741

### About ALK

ALK (Anaplastic lymphoma kinase) also known as ALK tyrosine kinase receptor or CD246 (cluster of differentiation 246) is an enzyme that in humans is encoded by the ALK gene. The ALK gene is mapped on 2p23.2-p23.1. Expressed in the small intestine, testis, and brain but not in normal lymphoid cells, ALK shows greatest sequence similarity to the insulin receptor subfamily of kinases. ALK plays an important role in the development of the brain and exerts its effects on specific neurons in the nervous system. The deduced amino acid sequences reveal that ALK is a novel receptor tyrosine kinase having a putative transmembrane domain and an extracellular domain. In *Drosophila*, localized Jeb activates Alk and the downstream Ras/mitogen-activated protein kinase cascade to specify a select group of visceral muscle precursors as muscle-patterning pioneers. Functional RNA interference screening on a set of these transcriptional targets revealed that CEBPB and BCL2A1 were absolutely necessary to induce cell transformation and/or to sustain growth and survival of ALK-positive ALCL cells. One particularly informative case presented a high-level gene amplification that was strictly limited to ALK, indicating that this gene may contribute on its own to neuroblastoma development. Mutated ALK proteins were overexpressed, hyperphosphorylated, and showed constitutive kinase activity. The knockdown of ALK expression in ALK-mutated cells, but also in cell lines overexpressing a wildtype ALK, led to a marked decrease of cell proliferation.

### Overview

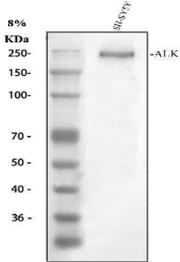
Product Name	Anti-ALK Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-ALK Antibody catalog # PA1741. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q9UM73

### Technical Details

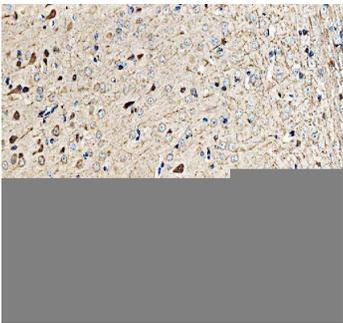
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human ALK, identical to the related rat and mouse sequences.
Recommended Detection Systems	Boster recommends ECL Plus Western Blotting Substrate (Catalog # AR1196-200) for Western

	blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Mouse, Rat

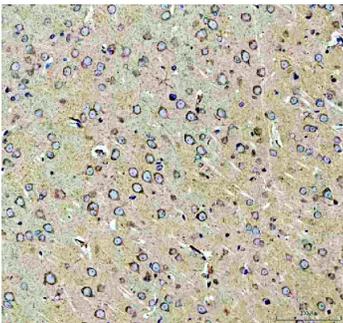
## Anti-ALK Antibody Picoband® (PA1741) Images



Western blot analysis of ALK using anti-ALK antibody (PA1741). Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human SH-SY5Y whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ALK antigen affinity purified polyclonal antibody (PA1741) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for ALK at approximately 250 kDa. The expected band size for ALK is at 176 kDa.



IHC analysis of ALK using anti-ALK antibody (PA1741). ALK was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ALK Antibody (PA1741) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of ALK using anti-ALK antibody (PA1741). ALK was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ALK Antibody (PA1741) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

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