

Product datasheet

Anti-ALK antibody [ALK/1503] - BSA and Azide free ab269763

[1 Image](#)

Overview

Product name	Anti-ALK antibody [ALK/1503] - BSA and Azide free
Description	Mouse monoclonal [ALK/1503] to ALK - BSA and Azide free
Host species	Mouse
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment within Human ALK aa 1360-1460. The exact sequence is proprietary. Database link: Q9UM73
Positive control	Recombinant Human ALK protein; HepG2 cell lysate.
General notes	<p>ab269763 is a carrier free version of ab219310.</p> <p>Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar[®] Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar[®] is a trademark of Fluidigm Canada Inc.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A/G purified
Purification notes	ab21931 was purified from Bioreactor Concentrate by Protein A/G.
Clonality	Monoclonal
Clone number	ALK/1503
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab269763 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 0.5 - 1 µg/ml. Predicted molecular weight: 176 kDa.

Target

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. Transduces signals from ligands at the cell surface, through specific activation of the mitogen-activated protein kinase (MAPK) pathway. Phosphorylates almost exclusively at the first tyrosine of the Y-x-x-x-Y-Y motif. Following activation by ligand, ALK induces tyrosine phosphorylation of CBL, FRS2, IRS1 and SHC1, as well as of the MAP kinases MAPK1/ERK2 and MAPK3/ERK1. Acts as a receptor for ligands pleiotrophin (PTN), a secreted growth factor, and midkine (MDK), a PTN-related factor, thus participating in PTN and MDK signal transduction. PTN-binding induces MAPK pathway activation, which is important for the anti-apoptotic signaling of PTN and regulation of cell proliferation. 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. Drives NF-kappa-B activation, probably through IRS1 and the activation of the AKT serine/threonine kinase. Recruitment of IRS1 to activated ALK and the activation of NF-kappa-B are essential for the autocrine growth and survival signaling of MDK.

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

Involvement in disease A chromosomal aberration involving ALK is found in a form of non-Hodgkin lymphoma. Translocation t(2;5)(p23;q35) with NPM1. The resulting chimeric NPM1-ALK protein homodimerize and the kinase becomes constitutively activated. The constitutively active fusion

proteins are responsible for 5-10% of non-Hodgkin lymphomas.

A chromosomal aberration involving ALK is associated with inflammatory myofibroblastic tumors (IMTs). Translocation t(2;11)(p23;p15) with CARS; translocation t(2;4)(p23;q21) with SEC31A. A chromosomal aberration involving ALK is associated with anaplastic large-cell lymphoma (ALCL). Translocation t(2;17)(p23;q25) with ALO17.

Neuroblastoma 3

The ALK signaling pathway plays an important role in glioblastoma, the most common malignant brain tumor of adults and one of the most lethal cancers. It regulates both glioblastoma migration and growth.

A chromosomal aberration involving ALK is found in one subject with colorectal cancer.

Translocation t(2;2)(p23.1;p23.3). A 5 million base pair tandem duplication generates an in-frame WDCP-ALK gene fusion.

Sequence similarities

Belongs to the protein kinase superfamily. Tyr protein kinase family. Insulin receptor subfamily.

Contains 1 LDL-receptor class A domain.

Contains 2 MAM domains.

Contains 1 protein kinase domain.

Post-translational modifications

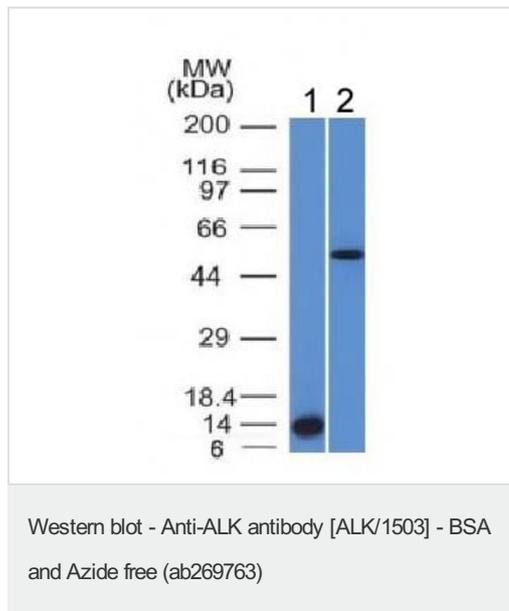
Phosphorylated at tyrosine residues by autocatalysis, which activates kinase activity. In cells not stimulated by a ligand, receptor protein tyrosine phosphatase beta and zeta complex (PTPRB/PTPRZ1) dephosphorylates ALK at the sites in ALK that are undergoing autophosphorylation through autoactivation. Phosphorylation at Tyr-1507 is critical for SHC1 association.

N-glycosylated.

Cellular localization

Cell membrane. Membrane attachment was crucial for promotion of neuron-like differentiation and cell proliferation arrest through specific activation of the MAP kinase pathway.

Images



All lanes : Anti-ALK antibody [ALK/1503] ([ab219310](#)) at 1 µg/ml

Lane 1 : Human recombinant ALK protein

Lane 2 : HepG2 cell lysate

Predicted band size: 176 kDa

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide ([ab219310](#)).

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