

Rabbit Anti-ALK antibody

SL0097R

Product Name	ALK
Chinese Name	间变型淋巴瘤激酶抗体
Alias	ALK tyrosine kinase receptor; ALK tyrosine kinase receptor precursor; ALK/EML4 fusion gene, included; ALK/NPM1 fusion gene, included; anaplastic lymphoma kinase (Ki-1); Anaplastic lymphoma kinase; Anaplastic lymphoma kinase Ki 1; Anaplastic lymphoma kinase Ki1; Anaplastic lymphoma kinase p80; CD 246; CD246; CD-246; CD246 antigen; EC 2.7.10.1; Ki 1; Ki1; NBLST3; Terz; TFG/ALK.
Research Area	immunology Neurobiology Signal transduction Growth factors and hormones transcriptional regulatory factor Kinases and Phosphatases b-lymphocyte TumourCell biologyMaker
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, (predicted: Mouse, Rat, Dog, Cow, Horse,)
Applications	Flow-Cyt=1 μ g /test (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	174kDa
Cellular localization	The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human CD246: 329-342/1620 <Extracellular>
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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This gene encodes a receptor tyrosine kinase, which belongs to the insulin receptor superfamily. This protein comprises an extracellular domain, an hydrophobic stretch corresponding to a single pass transmembrane region, and an intracellular kinase domain. It plays an important role in the development of the brain and exerts its effects on specific neurons in the nervous system. This gene has been found to be rearranged, mutated, or amplified in a series of tumours including anaplastic large cell lymphomas, neuroblastoma, and non-small cell lung cancer. The chromosomal rearrangements are the most common genetic alterations in this gene, which result in creation of multiple fusion genes in tumourigenesis, including ALK (chromosome 2)/EML4 (chromosome 2), ALK/RANBP2 (chromosome 2), ALK/ATIC (chromosome 2), ALK/TFG (chromosome 3), ALK/NPM1 (chromosome 5), ALK/SQSTM1 (chromosome 5), LK/KIF5B (chromosome 10), ALK/CLTC (chromosome 17), ALK/TPM4 (chromosome 19), and ALK/MSN (chromosome X).[provided by RefSeq, Jan 2011].

Product Detail

Function:

Neuronal orphan 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.

Subunit:

Homodimer. Homodimerizes when bound to ligand. Interacts with FRS2, IRS1, MDK, PTN and SHC1. Interacts with CBL, PIK3R1 and PLCG1.

Subcellular Location:

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

Tissue Specificity:

Expressed in brain and CNS. Also expressed in the small intestine and testis,

but not in normal lymphoid cells.

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.

N-glycosylated.

DISEASE:

Note=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

Note=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.

Similarity:

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.

SWISS:

Q9UM73

Gene ID:

238

Database links:

[Entrez Gene: 238](#) Human

[Entrez Gene: 11682](#) Mouse

[Entrez Gene: 266802](#) Rat

[Omim: 105590](#) Human

[SwissProt: Q9UM73](#) Human

[SwissProt: P97793](#) Mouse

[Unigene: 654469](#) Human

[Unigene: 311854](#) Mouse

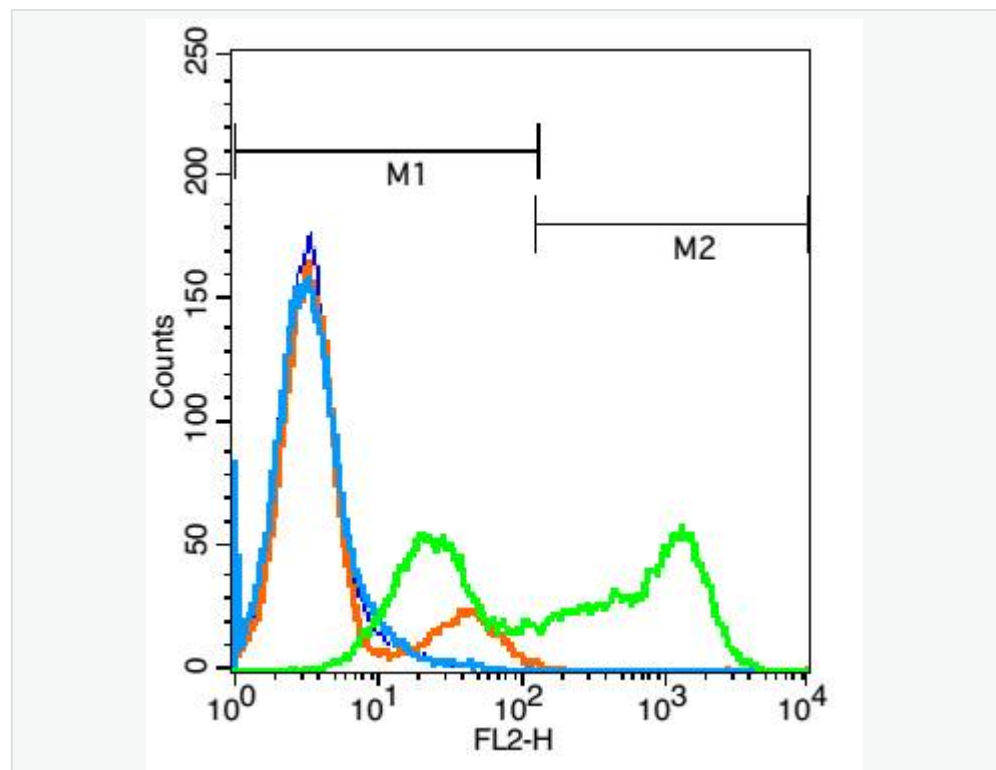
[Unigene: 201918](#) Rat

ALK 蛋白在细胞生长调控中起重要作用,主要表达在神经细胞,白细胞癌基因蛋白。

ALK p80 是多向性生长因子酪氨酸激酶受体蛋白,间变性大细胞淋巴瘤伴有 t(2;5) (p23;q35)染色体的易位,易位后的细胞基因表达分子量为 80kD,常伴有 CD30 阳性,ALK p80 阳性的间变性大细胞淋巴瘤预后好于阴性病例。

主要用于间变性大细胞淋巴瘤与何杰金氏淋巴瘤的鉴别诊断,间变性大细胞淋巴瘤中阳性率大约为 70%左右,还可以用于骨髓中间变性大细胞淋巴瘤的诊断。

Product Picture



Blank control: Jurkat cells(blue).

Primary Antibody:Rabbit Anti-ALK antibody(SL0097R), Dilution: 1 μ g in 100 μ L 1X PBS containing 0.5% BSA;

Isotype Control Antibody: Rabbit IgG(orange) ,used under the same conditions);

Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.

Protocol

The cells were fixed with 2% paraformaldehyde (10 min) . Primary antibody (SL0097R, 1 μ g /1x10⁶ cells) were incubated for 30 min on the ice, followed by 1 X PBS containing 0.5% BSA + 1 0% goat serum (15 min) to block non-specific protein-protein interactions. Then the Goat Anti-rabbit IgG/PE antibody was added into the blocking buffer mentioned above to react with the primary antibody at 1/200 dilution for 30 min on ice. Acquisition of 20,000 events was performed.