

Active Recombinant Human ALK, MYC/DDK-tagged

Cat. No. ALK-09H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human ALK, fused with C-terminal MYC/DDK, was expressed in HEK293 cells.
Species	Human
Source	HEK293
ProteinLength	1-1620aa
Description	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), ALK/KIF5B (chromosome 10), ALK/CLTC (chromosome 17), ALK/TPM4 (chromosome 19), and ALK/MSN (chromosome X).
Bio-activity	ALK activity verified in a biochemical assay: ALK (anaplastic lymphoma receptor

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

tyrosine kinase) activity was measured in a homogeneous time-resolved fluorescent (HTRF®) assay. ALK is an orphan receptor protein-tyrosine kinase having a putative transmembrane domain and an extracellular domain. Varying concentrations of ALK were added to a reaction mix containing ATP and a biotinylated kinase substrate and the reaction mixture was incubated to allow the protein to phosphorylate the substrate. HTRF detection reagents were then added, and the time-resolved fluorescent signal was measured on a Flexstation 3 microplate reader. The time resolved fluorescent signal is expressed as “delta R” or “ΔR” and is a ratio calculated from the fluorescent emission intensities of the donor and acceptor fluorors.

Molecular Mass	176.3 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration	>50 ug/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	ALK anaplastic lymphoma receptor tyrosine kinase [Homo sapiens (human)]
Official Symbol	ALK
Synonyms	ALK; CD246; NBLST3; anaplastic lymphoma receptor tyrosine kinase; ALK tyrosine kinase receptor; CD246 antigen; mutant anaplastic lymphoma kinase; NP_004295.2; EC 2.7.10.1
Gene ID	238
mRNA Refseq	NM_004304

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Protein Refseq	NP_004295
MIM	105590
UniProt ID	Q9UM73
Chromosome Location	2p23
Pathway	Non-small cell lung cancer
Function	ATP binding; NF-kappaB-inducing kinase activity; protein binding

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