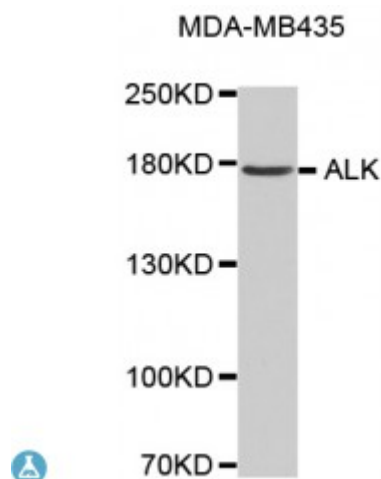


Anti-ALK Antibody



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).

Model	STJ116404
Host	Rabbit
Reactivity	Human, Mouse
Applications	IHC, WB
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 19-300 of human ALK (NP_004295.2).
Gene ID	238
Gene Symbol	ALK

Dilution range	WB 1:500 - 1:1000 IHC 1:50 - 1:100
Tissue Specificity	Expressed in brain and CNS, Also expressed in the small intestine and testis, but not in normal lymphoid cells
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	ALK tyrosine kinase receptor
Molecular Weight	176.442 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:427OMIM:105590
Alternative Names	ALK tyrosine kinase receptor
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,
Cellular Localization	Cell membrane,
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,