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# ALK

Mouse Monoclonal antibody(Mab)
Catalog # AD80132

## Product Information

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| **Application** | IHC-P |
| **Primary Accession** | Q9UM73 |
| **Reactivity** | Human |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Clone Names** | 137E9E8 |
| **Calculated MW** | 176442 |

## Additional Information

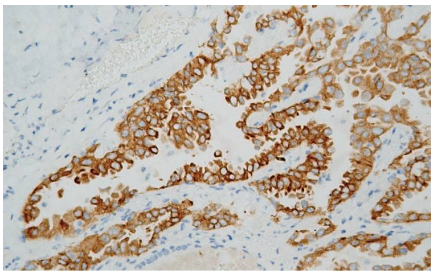
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| **Gene ID** | 238 |
| **Gene Name** | ALK |
| **Other Names** | ALK tyrosine kinase receptor, 2.7.10.1, Anaplastic lymphoma kinase, CD246, ALK {ECO:0000303\|PubMed:9174053, ECO:0000312\|HGNC:HGNC:427} |
| **Dilution** | IHC-P~~Ready-to-use |
| **Storage** | Maintain refrigerated at 2-8°C. |
| **Precautions** | ALK Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | ALK {ECO:0000303\|PubMed:9174053, ECO:0000312\|HGNC:HGNC:427} |
| **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 (PubMed:11121404, PubMed:11387242, PubMed:16317043, PubMed:17274988, PubMed:30061385, PubMed:34646012, PubMed:34819673). Also acts as a key thinness protein involved in the resistance to weight gain: in hypothalamic neurons, controls energy expenditure acting as a negative regulator of white adipose tissue lipolysis and sympathetic tone to fine-tune energy homeostasis (By similarity). Following activation by ALKAL2 ligand at the cell surface, transduces an extracellular signal into an intracellular response (PubMed:30061385, PubMed:33411331, PubMed:34646012, PubMed:34819673). In contrast, ALKAL1 is not a potent physiological ligand for ALK (PubMed:34646012). Ligand-binding to the extracellular domain induces tyrosine kinase activation, leading to activation of the mitogen-activated protein kinase (MAPK) pathway (PubMed:34819673). Phosphorylates almost exclusively at the first tyrosine of |

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| | the Y-x-x-x-Y-Y motif (PubMed:15226403, PubMed:16878150). Induces tyrosine phosphorylation of CBL, FRS2, IRS1 and SHC1, as well as of the MAP kinases MAPK1/ERK2 and MAPK3/ERK1 (PubMed:15226403, PubMed:16878150). ALK activation may also be regulated by pleiotrophin (PTN) and midkine (MDK) (PubMed:11278720, PubMed:11809760, PubMed:12107166, PubMed:12122009). PTN-binding induces MAPK pathway activation, which is important for the anti-apoptotic signaling of PTN and regulation of cell proliferation (PubMed:11278720, PubMed:11809760, PubMed:12107166). 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 (PubMed:12122009). Drives NF-kappa-B activation, probably through IRS1 and the activation of the AKT serine/threonine kinase (PubMed:15226403, PubMed:16878150). Recruitment of IRS1 to activated ALK and the activation of NF-kappa-B are essential for the autocrine growth and survival signaling of MDK (PubMed:15226403, PubMed:16878150). May function as regulator of gastric epithelial differentiation (By similarity). |
| **Cellular Location** | Cell membrane; Single-pass type I membrane protein Note=Membrane attachment is essential for promotion of neuron-like differentiation and cell proliferation arrest through specific activation of the MAP kinase pathway. |
| **Tissue Location** | Expressed in brain and CNS. Also expressed in the small intestine and testis, but not in normal lymphoid cells |

## Images



Immunohistochemical analysis of formalin-fixed and paraffin-embedded human lung adenocarcinoma tissue was performed with ALK primary antibody, followed by peroxidase-conjugated secondary antibody and DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.