

## Product datasheet for MR221949

### Alk (NM\_007439) Mouse Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | Alk (NM_007439) Mouse Tagged ORF Clone                                      |
| Tag:                      | Myc-DDK   |
| Symbol:                   | Alk   |
| Synonyms:                 | CD246; Tcrz   |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)  |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |
| ORF Nucleotide Sequence:  | >MR221949 representing NM_007439<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGAGCTGCTGGGTTCTGTGGCTGCTGCCTCCACTGCTTTTGGCAGCAGCCTCGTACTCCGGAGCTG  
CAACCGATCAGCGCGGGTTCCCCAGCCTCAGGGCTCCTCTGCAGCCCCGGGAGCCGCTCAGTTATTC  
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TGTGGCTGGACCCAAAGTCCACTCTACCCCATATGCCCCGGTGGCAAGTGAGGACCCTAAGAGATGCC  
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 AGGGATATTTACTCTAAAACAGACACATGGTCTTTGGAGTGTGCTATGGGAAATATTTTCTTGGGA  
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 GGATGCCACCTTTGCTGGTGTCTCCCCAGCCTGCGAAGCAGGAGGCGTCCGCAGTCCCCAGCCCCG  
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 TGTCAACTATGGTTACCAGCAACAGGGTCTCCCTTGAAGCCACAGCCGCGCCAGGGGACACCATGCTG  
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA



ACCN: NM\_007439

ORF Size: 4863 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_007439.2](#), [NP\\_031465.2](#)

**RefSeq Size:** 5918 bp

**RefSeq ORF:** 4866 bp

**Locus ID:** 11682

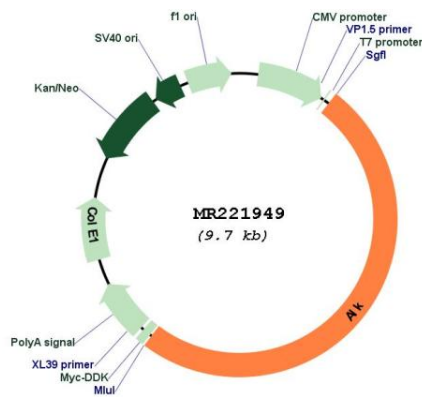
**UniProt ID:** [P97793](#)

**Cytogenetics:** 17 43.77 cM

**MW:** 175.4 kDa

**Gene Summary:**

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 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.[UniProtKB/Swiss-Prot Function]

**Product images:**


Circular map for MR221949