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Product datasheet for RC400193

ALK (NM_004304) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	ALK (NM_004304) Human Mutant ORF Clone
Mutation Description:	R1275Q
Affected Codon#:	1275
Affected NT#:	c.3824
Nucleotide Mutation:	ALK Mutant (R1275Q), Myc-DDK-tagged ORF clone of Homo sapiens anaplastic lymphoma receptor tyrosine kinase (ALK) as transfection-ready DNA
Effect:	Missense
Symbol:	ALK
Synonyms:	CD246; NBLST3
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_004304
ORF Size:	4860 bp
Restriction Sites:	SgfI-MluI
ORF Nucleotide Sequence:	>RC400193 representing NM_004304 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGGGAGCCATCGGGCTCCTGTGGCTCCTGCCGCTGCTGCTTTCCACGGCAGCTGTGGGCTCCGGGATGG GGACCGGCCAGCGCGCGGGCTCCCCAGCTGCGGGGCCGCCGCTGCAGCCCCGGGAGCCACTCAGCTACTC GCGCCTGCAGAGGAAGAGTCTGGCAGTTGACTTCGTGGTGCCCTCGCTCTTCCGTGTCTACGCCCGGGAC CTACTGCTGCCACCATCCTCCTCGGAGCTGAAGGCTGGCAGGCCCGAGGCCCGCGGCTCGCTAGCTCTGG ACTGCGCCCCGCTGCTCAGGTTGCTGGGGCCGGCGCCGGGGGTCTCCTGGACCGCCGGTTCACCAGCCCC GGCAGAGGCCCGGACGCTGTCCAGGGTGCTGAAGGGCGGCTCCGTGCGCAAGCTCCGGCGTGCCAAGCAG TTGGTGCTGGAGCTGGGCGAGGAGGCGATCTTGGAGGGTTGCGTCGGGCCCCCCGGGGAGGCGGCTGTGG

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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC400193 representing NM_004304
Red=Cloning site Green=Tags(s)

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CNNAYQNSNLSVEVGSEGPLKGIQIWKVPATDTYSISGYGAAGGKGGKNTMMRSHGVSVLGIFNLEKDDM
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KKWGWETRGGFGGGGGGCSSGGGGGGYIGGNAASNNDPEMDGEDGVSFISPLGILYTPALKVMEGHGEVN
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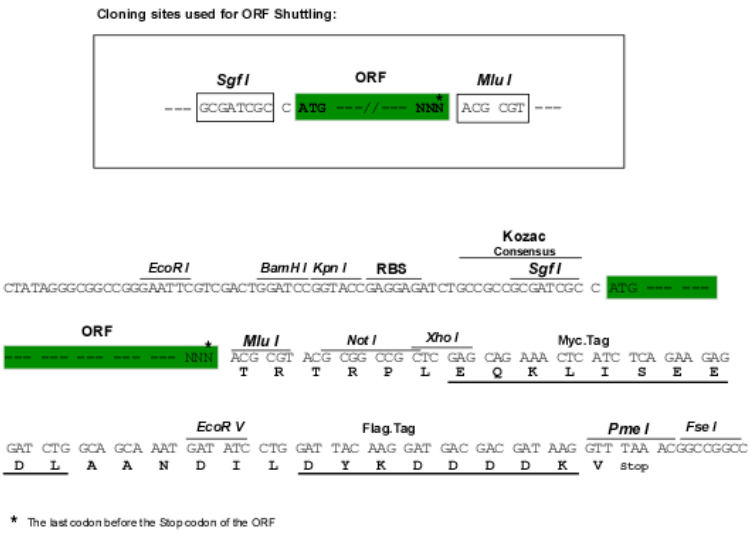
Restriction Sites: SgfI-MluI

Cloning Scheme:



OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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).

RefSeq: NP_004295

RefSeq Size: 6267 bp

RefSeq ORF: 4863 bp

Locus ID:	238
Cytogenetics:	2p23.2-p23.1
Protein Families:	Druggable Genome, Protein Kinase
MW:	176 kDa
Gene Summary:	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).[provided by RefSeq, Jan 2011]