

Product datasheet for **RC224463**

AK3L1 (AK4) (NM_001005353) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: AK3L1 (AK4) (NM_001005353) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: AK3L1
Synonyms: AK3; AK3L1; AK3L2; AK 4
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC224463 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTTCCAACCTCTGCGCGGGTCATCCTCGGGCCGCCGGCTCGGGCAAGGGCACCGTGAGCCAGA
GGATCGCCAGAACTTTGGTCTCCAGCATCTCTCCAGCGGCCACTTCTTGC GGAGAACATCAAGGCCAG
CACCGAAGTTGGTGAGATGGCAAAGCAGTATATAGAGAAAAGTCTTTTGGTTCCAGACCATGTGATCACA
CGCCTAATGATGTCCGAGTTGGAGAACAGCGGTGCCAGCACTGGCTCCTTGATGGTTTTCTAGGACAT
TAGGACAAGCCGAAGCCCTGGACAAAATCTGTGAAGTGGATCTAGTGATCAGTTTGAATATTCATTGGA
AACACTTAAAGATCGTCTCAGCCGCCGTTGGATTCACCCCTCTAGCGGAAGGGTATATAACCTGGACTTC
AATCCACCTCATGTACATGGTATTGATGACGTCCTGGTGAACCGTTAGTCCAGCAGGAGGATGATAAAC
CCGAAGCAGTTGCTGCCAGGCTAAGACAGTACAAAGACGTGGCAAAGCCAGTCATTGAATTATACAAGAG
CCGAGGAGTGCTCCACCAATTTCCGGAACGGAGACGAACAAAATCTGGCCCTACGTTTACACACTTTTC
TCAAACAAGATCACACCTATTCAGTCCAAAGAAGCATAT

ACGCGTACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC224463 protein sequence
Red=Cloning site Green=Tags(s)

MASKLLRAVILGPPGSGKGTVSQRIAQNFGLQHLSSGHFLRENIKASTEVEGEMAKQYIEKSLLPDHHVIT
 RLMMSLELNRRGQHWLLDGFPRTLGQAEALDKICEVDLVISLNIPFETLKDRLSRRWIHPPSGRVYNLDF
 NPPHVHGIDDVTGEPLVQQEDDKPEAVAARLRQYKDVAKPVIELYKSRGVLHQFSGTETNKIWPYVYTLF
 SNKITPIQSKEAY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6329_f04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001005353

ORF Size: 669 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_001005353.2](#), [NP_001005353.1](#)

RefSeq Size: 6998 bp

RefSeq ORF: 672 bp

Locus ID: 205

UniProt ID: [P27144](#)

Cytogenetics: 1p31.3

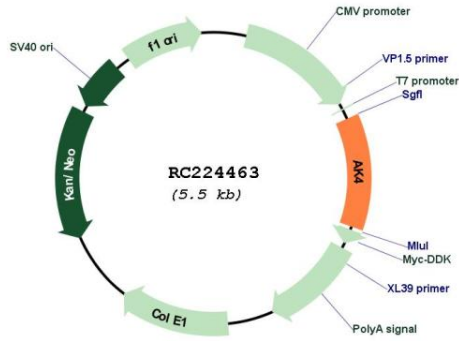
Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Purine metabolism

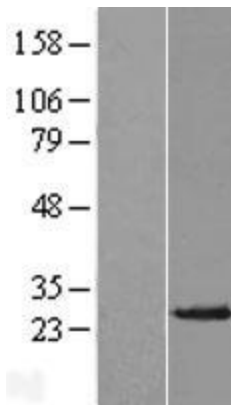
MW: 25.3 kDa

Gene Summary: This gene encodes a member of the adenylate kinase family of enzymes. The encoded protein is localized to the mitochondrial matrix. Adenylate kinases regulate the adenine and guanine nucleotide compositions within a cell by catalyzing the reversible transfer of phosphate group among these nucleotides. Five isozymes of adenylate kinase have been identified in vertebrates. Expression of these isozymes is tissue-specific and developmentally regulated. A pseudogene for this gene has been located on chromosome 17. Three transcript variants encoding the same protein have been identified for this gene. Sequence alignment suggests that the gene defined by NM_013410, NM_203464, and NM_001005353 is located on chromosome 1. [provided by RefSeq, Jul 2008]

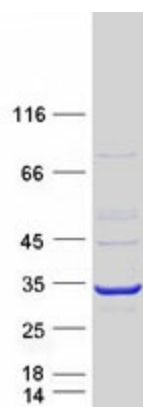
Product images:



Circular map for RC224463



Western blot validation of overexpression lysate (Cat# [LY423694]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224463 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified AK4 protein (Cat# [TP324463]). The protein was produced from HEK293T cells transfected with AK4 cDNA clone (Cat# RC224463) using MegaTran 2.0 (Cat# [TT210002]).