

Product datasheet for **RC204408**

AK3 (NM_016282) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AK3 (NM_016282) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	AK3
Synonyms:	AK3L1; AK6; AKL3L; AKL3L1; FIX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204408 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCC**CGATCGCC**

ATGGGGCGTCCGCGGGCTGCTGCGAGCGGTGATCATGGGGCCCCGGGCTCGGGCAAGGGCACCGTGT
CGTCGCGCATCACTACACACTTCGAGCTGAAGCACCTCTCCAGCGGGGACCTGCTCCGGGACAACATGCT
GCGGGGCACAGAAATTGGCGTGTAGCCAAGGCTTTCATTGACCAAGGGAACTCATCCAGATGATGTC
ATGACTCGGCTGGCCCTTCATGAGCTGAAAAATCTCACCCAGTATAGCTGGCTGTTGGATGGTTTTCCAA
GGACACTCCACAGGCAGAAGCCCTAGATAGAGCTTATCAGATCGACACAGTGATTAACCTGAATGTGCC
CTTTGAGGTCATTAACAACGCCTTACTGCTCGCTGGATTATCCCGCCAGTGGCCGAGTCTATAACATT
GAATTC AACCTCCAAAACGTGGGCATTGATGACCTGACTGGGGAGCCTCTCATTACGCGTGAGGATG
ATAAACAGAGACGGTTATCAAGAGACTAAAGGCTTATGAAGACCAAAACAAGCCAGTCTGGAATATTA
CCAGAAAAAGGGGTGCTGGAAACATTCTCCGGAACAGAAACCAACAAGATTTGGCCCTATGTATATGCT
TTCCTACAAACTAAAGTTCACAAAGAAGCCAGAAAGCTTCAGTTACTCCA

ACGCGTACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC204408 protein sequence
Red=Cloning site Green=Tags(s)

MGASARLLRAVIMGAPGSGKGTVSSRITTHFELKHLSSGDLLRDNMLRGTEIGVLAKAFIDQGKLIPDDV
MTRLALHELKNTQYSWLLDGFRTLTPQAEALDRAYQIDTVINLNVPFVIKQRLTARWIHPASGRVYNI
EFNPPKTVGIDDLTGEPLIQREDDKPEVTKRKLKAYEDQTKPVLEYYQKKGVLETFSGTETNKIWPYVYA
FLQTKVPQRSQKASVTP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6310_e07.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_016282

ORF Size: 681 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_016282.4](#)

RefSeq Size: 4333 bp

RefSeq ORF: 684 bp

Locus ID: 50808

UniProt ID: [Q9UIJ7](#)

Cytogenetics: 9p24.1

Domains: ADK, ADK_lid

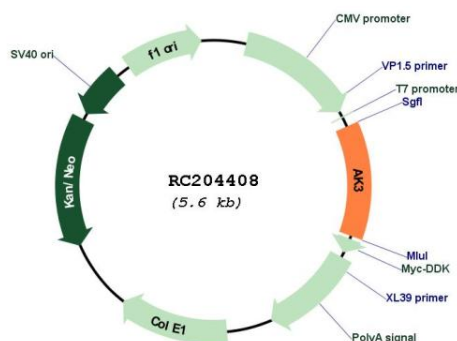
Protein Families: Druggable Genome

Protein Pathways: Pyrimidine metabolism

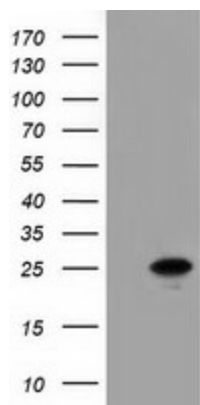
MW: 25.6 kDa

Gene Summary: The protein encoded by this gene is a GTP:ATP phosphotransferase that is found in the mitochondrial matrix. Several transcript variants encoding a few different isoforms have been found for this gene. [provided by RefSeq, Dec 2010]

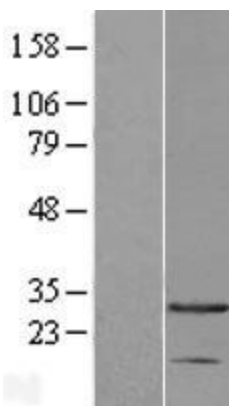
Product images:



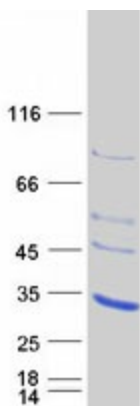
Circular map for RC204408



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY AK3 (Cat# RC204408, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-AK3 (Cat# [TA501819]). Positive lysates [LY414079] (100ug) and [LC414079] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY414079]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204408 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified AK3 protein (Cat# [TP304408]). The protein was produced from HEK293T cells transfected with AK3 cDNA clone (Cat# RC204408) using MegaTran 2.0 (Cat# [TT210002]).