

Product datasheet for **SC114801**

ARK5 (NUAK1) (NM_014840) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ARK5 (NUAK1) (NM_014840) Human Untagged Clone
Tag:	Tag Free
Symbol:	NUAK1
Synonyms:	ARK5
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Cell Selection:	None



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Fully Sequenced ORF:

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>OriGene ORF sequence for NM_014840 edited
ATGGAAGGGGCCCGCGCCTGTGGCGGGGACCGCCCCGACTTGGGGCTGGGGCGCCG
GGCTCTCCCCGAGAGCGGTGGCGGGGGCGACTGCAGCCCTGGAGCCCAGGAAGCCGCAC
GGGGTGAAGCGGCATCACCACAAGCACAACCTTGAAGCACCGCTACGAGCTGCAGGAGACC
CTGGGCAAAGGCACCTACGGCAAAGTCAAGCGGGCCACCGAGAGGTTTTCTGGCCGAGTG
GTTGCTATAAAATCCATTTCGTAAGGACAAAATTAAGGATGAACAAGACATGGTTACACAT
AGACGAGAGATTGAGATCATGTCTCTCAACCATCTCATATCATCAGTATTTATGAA
GTGTTTGAGAACAAGATAAGATTGTGATCATCATGGAATATGCCAGCAAAGGGGAGCTG
TACGATTACATCAGTGAGCGGCGACGCCTCAGTGAGAGGGAGACCCGGCACTTCTCCGG
CAGATCGTCTCTGCTGTGCACTATTGTCACAAGAACGGTGTGGTCCACCGGGACTTGAAG
CTGAAAAATATACTGCTCGATGACAACCTGCAATATTAAGATTGCTGACTTTGGGCTTTCC
AACCTGTACCAGAAGGATAAGTTCTTACAAACGTTTTGTGGGAGTCCACTCTATGCATCT
CCTGAGATTGTCAATGGGAGACCTTACCGAGGGCCAGAGGTGGACAGCTGGGCCCTGGGT
GTGTTGCTTTACTCTTGTGTTATGGAACAATGCCCTTCGATGGTTTTCGATCACAAAAAC
CTATTCCGCAAATCAGCAGCGGAGAGTACCGGGAGCCAACACAGCCCTCAGATGCTCGA
GGACTCATACGGTGGATGCTGATGGTGAACCCGATCGCCGGGCCACTATTGAGGACATT
GCCAACCACTGGTGGTGAACCTGGGGCTATAAGAGCAGCGTGTGTGACTGTGATGCCCTC
CATGACTCTGAGTCCCCACTCCTGGCTCGGATCATTGACTGGCACCACCGTTCCACAGGG
CTGCAGGCTGACACCGAAGCCAAAATGAAGGGCCTGGCCAAACCCACGACCTCTGAGGTC
ATGCTAGAGCGGCAGCGGTGCTGAAGAAATCCAAGAAAGAGAATGACTTTGCTCAGTCT
GGTCAGGATGCAGTGCCTGAAAGCCCATCCAAGTTGAGTTCTAAGAGGCCCAAGGGGATC
CTGAAGAAGCGAAGCAACAGCGAGCATCGCTCTCACAGCACTGGCTTATTGAAGGTGTA
GTTGGTCTGCTTACCCTCTACTTTCAAGATGGAGCAGGACTTGTGCAGGACTGGCGTG
CTCCTCCCAAGCTCACCAGAGGCAGAGGTGCCGGGAAAACCTCAGCCCCAAGCAGTCGGCC
ACGATGCCAAGAAAGGCATCTTGAAAAAGACCCAGCAGAGAGAATCAGTTACTACTCT
TCCCCAGAGCGCAGTGAGTCTTCGGAGCTGTTGGACAGTAATGATGTGATGGGCAGCAGC
ATCCCCTCCCCAGCCCCCGGACCCAGCCAGGGTAACCTCCCACAGCCTCTCCTGCCGG
AGGAAGGGCATCTTGAACACAGCAGCAAATACTCAGCGGGCACCATGGACCCAGCCCTG
GTCAGCCCTGAAATGCCACACTGGAATCCCTGTCAGAGCCTGGTGTCCCTGCCGAGGGC
CTCTCCCGGAGCTACAGCCGCCCTTCCAGTGTCATCAGCGATGACAGCGTGTGTCCAGC
GACTCTTTTACTTGTGATTTGCAGGAGAATCGCCCTGCCCGCCAGCGCATCCGCAGC
TGCGTCTCTGCAGAAAATTCCTCCAGATCCAGGACTTTGAGGGCTCCAGAACCGGCC
CGGCCCAAGTACCTGAAGCGGTACCGGAACCGGCTGGCAGACAGCAGCTTCTCCCTCCTC
ACAGACATGGATGATGTGACTCAGGTCTACAAGCAAGCGCTGGAGATCTGCAGCAAGCTC
AACTAG
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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_014840 unedited</p> <pre> AGGATTTTGTAAACGACTCACTATTAGGGCGGCCGATTTCGGCACGAGGGCCACCGCC GCCACCTCGCCCGAGCTCCACAGCTCGCCGCGCCGGGGGGCGGTGCGCGGACCGTGC GCCGCGGGCGCCAGATGTGCAGTCCCGCCGCCCGCAGTGACCGAGCCGAGTCCGAGCG GTATCGGGCCGCTCCCTGATGCTGCGGGGGCGACCTTGAGCGTACAGCGGCTTCCCTCG GTGGGGACCCCGACATCCAGCGCTGTGCCCGTCTTGCCCTCTGTAGCCCGGCTCGCC CGCGCTTGGACATGGAAGGGGCCCGCCGCTGTGGCGGGGGACCGCCCGACTTGGGGC TGGGGGCCCGGCTCTCCCGAGAGCGGTGGCGGGGGCGACTGCAGCCCTGGAGCCCA GGAAGCCGCACGGGTGAAGCGGCATACCACAAGCACAACTTGAAGCACCGCTACGAGC TGCAGGAGACCCTGGGCAAAGGCACCTACGGCAAAGTCAAGCGGGCCACCGAGAGTTTT CTGGCCGAGTGGTTGCTATAAAATCCATTCGTAAGGACAAAATTAAGGATGAACAAGACA TGGTTCACATCAGACGAGAGATTGAGATCATGTCATCTCTCAACCATCCTCATATCATCA GTATTTATGAAGTGTGAGAACAAGATAAGATTGTGATCATGGAATATGCCAGCA AAGGGGAGCTGTACGATTACATCAGTGAGCGGCGACGCCTCAGTGAGAGGGAGACCCGGC ACTTCTTCGGCAGATCGTCTCTGCTGTGCACTATTGTACAAGAACGGGTGTGGTCCAC CGGGACTTGAAGCTGGNAAATATACTGCTCGATGACNACTGGCATATTAAGATTGCTGAC TNTGGNCTTTCACCTGTACCAAAGGGATAGTCTTACAAAACGTTGTGGGAGTNCCTCTT N </pre>
3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_014840 unedited</p> <pre> NTTTTTAGCTATGNNACCGCGCCGAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTTTT AACCTCTATTAGAGTTTCAGGAAGGAGGTGGAATTGAATGAAAGGAAATTGAGCAGCTTCC CATAACACACTGCTCAGCTCAACCTGAAGGAACGCATAAGCCAAAACACCAGAGCCGGTG GCAAGGGGAGAGCCAAACTGTCTCCTTAAGGAAAGGGCAATTCCATTCTAATGCACTTT CTTAGCACTGTAAGGTGAATTTTTTCTCATCTCCCTAGAACTATTGTTTGTGGTTTTT CCAAAGATGTTCCCAAGACCAGTCTTTTCTATCTACACGCTACCAGTGGTGGCCAT CTTGAAGTCAATTTGCCTTGGCCAGCAGAATCTGAAGTCACTCCAGAGACCAGGA AGTACAAACCTAGTATCATGAAGGTGCCATGGNTTGGAGTGGCATCTTGTGATTGTGA TCTGGGGTGTGTAAGAACTACTAGTNTTTTTGTTTTGGTTTTGGTTTTGGTTTTGTTT ACTTTTTAAGATAAAGAGTCTGCCGAACCTTTTTTCTGTCTCCCCANAACCATCTGG GAAACATTTAGGGGAAAGGTCCTTTTAAAGGCTTTCTCCCCACCCCTGGATT TTTTTAAACCTTTTTTATTTTAAAGGAAAGGAAATTTTTTTTTTCCCCACAAACCCC AGGAATTTTTTGGGCAAAGTGTAAAAACCCCGCCCTAAAAAATTCTAAATTTGGG GGGGAAAAAAAACCCCGCCCGGTTTTTCTTTTTTCCCTCCCCATAATCC CCTTTTTAG </pre>
Restriction Sites:	NotI-NotI
ACCN:	NM_014840
Insert Size:	4370 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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_014840.2](#), [NP_055655.1](#)

RefSeq Size: 6821 bp

RefSeq ORF: 1986 bp

Locus ID: 9891

UniProt ID: [O60285](#)

Cytogenetics: 12q23.3

Domains: pkinase, TyrKc, S_TKc

Protein Families: Druggable Genome, Protein Kinase

Gene Summary: Serine/threonine-protein kinase involved in various processes such as cell adhesion, regulation of cell ploidy and senescence, cell proliferation and tumor progression. Phosphorylates ATM, CASP6, LATS1, PPP1R12A and p53/TP53. Acts as a regulator of cellular senescence and cellular ploidy by mediating phosphorylation of 'Ser-464' of LATS1, thereby controlling its stability. Controls cell adhesion by regulating activity of the myosin protein phosphatase 1 (PP1) complex. Acts by mediating phosphorylation of PPP1R12A subunit of myosin PP1: phosphorylated PPP1R12A then interacts with 14-3-3, leading to reduced dephosphorylation of myosin MLC2 by myosin PP1. May be involved in DNA damage response: phosphorylates p53/TP53 at 'Ser-15' and 'Ser-392' and is recruited to the CDKN1A/WAF1 promoter to participate to transcription activation by p53/TP53. May also act as a tumor malignancy-associated factor by promoting tumor invasion and metastasis under regulation and phosphorylation by AKT1. Suppresses Fas-induced apoptosis by mediating phosphorylation of CASP6, thereby suppressing the activation of the caspase and the subsequent cleavage of CFLAR. Regulates UV radiation-induced DNA damage response mediated by CDKN1A. In association with STK11, phosphorylates CDKN1A in response to UV radiation and contributes to its degradation which is necessary for optimal DNA repair (PubMed:25329316).[UniProtKB/Swiss-Prot Function]