

Product datasheet for **SC114182**

ZAK (MAP3K20) (NM_016653) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ZAK (MAP3K20) (NM_016653) Human Untagged Clone
Tag:	Tag Free
Symbol:	ZAK
Synonyms:	AZK; CNM6; MLK7; mlklak; MLT; MLTK; MLTKalpha; MLTKbeta; MRK; pk; SFMMP; ZAK
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene ORF sequence for NM_016653 edited
ATGTCGCTCTCCGGTGCCTCCTTTGTGCAAATTAATTTGATGACTTGCAGTTTTTTGAA
AACTGCGGTGGAGGAAGTTTTGGGAGTGTTTATCGAGCCAAATGGATATCACAGGACAAG
GAGGTGGCTGTAAAGAAGCTCCTCAAAATAGAGAAAGAGGCAGAAATACTCAGTGCCTC
AGTCACAGAAACATCATCCAGTTTTATGGAGTAATTCTTGAACCTCCCAACTATGGCATT
GTCACAGAATATGCTTCTCTGGGATCACTCTATGATTACATTAAACAGTAACAGAAAGTGA
GAGATGGATATGGATCACATTATGACCTGGGCCACTGATGTAGCCAAAGGAATGCATTAT
TTACATATGGAGGCTCCTGTCAAGGTGATTCACAGAGACCTCAAGTCAAGAAACGTTGTT
ATAGCTGCTGATGGAGTATTGAAGATCTGTGACTTTGGTGCCTCTCGTTCCATAACCAT
ACAACACACATGTCTTGGTTGGAACCTTCCCATGGATGGCTCCAGAAGTTATCCAGAGT
CTCCCTGTGTCAGAACTTGTGACACATATTCCTATGGTGTGGTTCTCTGGGAGATGCTA
ACAAGGGAGGTCCCCTTTAAAGGTTTGAAGGATTACAAGTAGCTTGGCTTGTAGTGAA
AAAAACGAGAGATTAACCATTCCAAGCAGTTGCCCCAGAAGTTTTGCTGAACTGTTACAT
CAGTGTTGGGAAGCTGATGCCAAGAAACGGCCATCATTCAAGCAAATCATTTCAATCCTG
GAGTCCATGTCAAATGACACGAGCCTTCTGACAAGTGAACCTATTCTACACAACAAG
GCGGAGTGGAGGTGCGAAATTGAGGCAACTCTTGAAGGCTAAAGAAACTAGAGCGTGAT
CTCAGCTTAAAGGAGCAGGAGCTTAAAGAACGAGAAAGACGTTTAAAGATGTGGGAGCAA
AAGCTGACAGAGCAGTCCAACACCCCGTCTGCCTTCTTTGAGATTGGTGCATGGACG
GAAGACGATGTGTATTGTTGGGTTCAAGCAGCTCGTCAGAAAAGGTGACTTTCAGCAGAG
ATGAGTGTATATGCAAGCTTGTTTAAAGAAAACAACATTACAGGGGAGCGGCTGCTGCTG
CTGGAGGAAGAAGACCTGAAAGACATGGGCATTGTCTCCAAGGGGCATATCATTCACTTC
AAGTCAGCCATTGAGAAATTAACCCATGATTACATAAATTTGTTTCACTTCCCACCACTA
ATTAAGGACTCAGGAGGTGAACCTGAAGAAAATGAGGAAAAAATAGTGAACCTGGAAGTCA
GTTTTTGGTTTTCACTTGAACCAGGAACTGGCCACAGGATTGTAAAGTGAAAAATGTAT
ATGGAGATGGATGGGGATGAAATTGCAATAACCTACATAAAAGATGTGACATTCAACACT
AACCTACCTGATGCGGAGATTTTAAAGATGACAAAGCCACCATTGTAATGGAGAAGTGG
ATTGTAGGAATAGCAAAAAGTCAGACTGTGGAGTGCCTGTCACATATGAGAGTGATGTT
AGAAGTCCAAAAGCACTAAACATGTCCATTGATTGAGTGGAGTAGAACAAAACCTCAG
GATGAAGTGAAGCAGTCCAACCTTGCCTTCCAGACATTATCACCAATTCAGATGGCAAC
CCTGGAAGCAGGTCCGACTCAAGTGCTGATTGCCAGTGGTTAGATACTCTGAGGATGCGG
CAGATTGCATCCAACACTTCTTTACAGCGTTCCAGAGCAATCCTATTCTGGGGTACCG
TTCTTCTCACACTTTGATGGCCAGGATTCTACGCTGCTGCTGTGAGACGGCCCCAGGTG
CCCATTAAAGTATCAACAGATTACACCTGTGAACAGTCCAGAAGCTCGTCTCCTACTCAG
TATGGACTGACAAAAAATTTCTTCCCTACATCTCAACTCTAGGGACAGTGGCTTTTCC
AGTGGCAATACTGACACCTTTCAGAGAGGGGTCGATACTCAGACAGAAGCAGGAACAAA
TATGGACGTGGTAGTATATCACTCAATTTCTTCTCCTAGAGGAAGATACAGTGGAAAGAGT
CAGCATTCCACTCCTTCAAGAGGAAGATACCCTGGAAAGTTCTACAGGGTTTCTCAGTCA
AACACCATACCAGGGATGCCTTTGCACCCTGAGACTGACTCAAGAGCCAGTGAAGAGGAC
AGCAAAGTCAGCGAAGGGGCTGGACAAAAGTGAATACCGGAAAAAGCCCCACAGGCCA
TCTCCCGCCAAAACCAATAAAGAGAGAGCCAGAGGGGACCACCGTGGATGGAGAACTTT
TGA
    
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5' Read Nucleotide Sequence:

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>OriGene 5' read for NM_016653 unedited
ACTCGNGTTTGTAAACGACTTCTATAGGCGGCCGACGAATTCGCACGAGGGAGAGGCGGA
ATGTTCAACTCCTAACTGCGGCGGAAACGTGGGAGCCGCGCGGGCCGCTGTCGTCCCAAC
CCCCGCGCCCTCGTCGCGCGCGGGCCCTCCGCGCCCCGGCTGCTGCTCACGCCCCGCC
CGGGAGCCAGATTTGTGGAAGTATAACTTTGTTATTATGAGATGTCGTCTCTCGGTG
CCTCCTTTGTGCAAATTAATTTGATGACTTGCAGTTTTTTGAAAACGCGGTGGAGGAA
GTTTTGGGAGTGTATCGAGCCAAATGGATATCACAGGACAAGGAGGTGGCTGTAAAGA
AGCTCCTCAAAATAGAGAAAGAGGCAGAAATACTCAGTGTCTCAGTCACAGAAACATCA
TCCAGTTTTATGGAGTAATCTTGAACCTCCAACTATGGCATTGTCACAGAATATGCTT
CTCTGGGATCACTCTATGATTACATTAACAGTAACAGAAGTGAGGAGATGGATATGGATC
ACATTATGACCTGNGCCACTGATGTAGCCAAAGGAATGCATTATTTACATATGGAGGCTC
CTGTCAAGGTGATTCACAGAGACCTCAAGTCAAGAAACGTTGTTATAGCTGCTGATGGAG
TATTGAAGATCTGTGACTTTGGTGCCTCTCGGTTCCATAACCATAACAACACATGTCCT
TGGTTGGAACTTCCCATGGATGGCNTCAGAAGTTATCCAGAGTCTCCCTGTGTCAGAAA
CTTGTGACACATATCCCTATGGTGTGGTTCTCTGGGAGATGCTACAAGGGGAGTCCCC
TTTAAAGGTTGGNAGGAATACCAGTAGCTTGGCTTGGNNTGAAAAAACGANAGATTACC
CTTCCAGCAGTTGCCCCAGAATTT
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3' Read Nucleotide Sequence:

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>OriGene 3' read for NM_016653 unedited
CCGCGCCGCAATCTAGNATCGAGTTTTTTTTTTTTTTTTTAACTGCTTAGAAAACTA
TGTAAGTCAATTCATCAAAAGTTTTCTCCATCCACGGTGGTCCCCTCTGGCTCTCTTTA
TTGGTTTTGGCGGAGATGGCCTGTGGGGCTTTTTCCGGTATTCCACTTTTGCCAGCCC
CCTTCGCTGACTTTGCTGTCTCTTCACTGGCTCTTGAGTCAGTCTCAGGGTGCAAAGGC
ATCCCTGGTATGGTGTGGGTTGGTGGAGTCCCTGGGGCTTCTCTTGAAGTCAGGCGAC
TGGTGAGGATTGAGTGTGACTGAGAAACCCTGTAGAACCTTCCAGGGTATCTTCTCTT
GAAGGAGTGGAATGCTGACTCTTCCACTGTATCTTCTCTAGGAGAAGAATTGAGTGAT
ATACTACCACGTCCATATTTGTTCTGCTTCTGTCTGAGTATCGACCCCTCTCTGAAGAG
GTGTCAGTATTGCCACTGGAAAAGCCACTGTCCCTAGAGTTGAGATGTAGGAAGAGAAG
TTTTTGGTCAGTCCATACTGAGTAGGAGACGAGCTTCTGGACTGGTTCACAGGTGTAATC
TGTTGATACTTAATGGGCACCTGGGGCCGCTCACAGCAGCAGCGTAGGAATCCTGGCCA
TCAAAGTGTGAGAAGAACGGTGACCCAGAAATAGGATTGCTCTGGGAACGCTGTANAGAA
AGTGTGGGATGCATCTGCCGCATCTCAGAGTATCTAACCACTGGNCATCAGCACTTGAG
TCGGACCTGCTTCCAGGGTGCCATCTGAATTGGTGAATATGGCTGAATGGGCAGTTGG
ACTGCTTCACTTCTCCTGGAGGGTTTGNTCTACTCACTGATCGATGGACATGNTAGTNGC
TTTTGGNAGTCTACATACTCATAGTGACGGGCACTCCAGTCTGACTT
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Restriction Sites:

NotI-NotI

ACCN:

NM_016653

Insert Size:

2690 bp

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](#)

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_016653.1](#), [NP_057737.1](#)

RefSeq Size: 3767 bp

RefSeq ORF: 2403 bp

Locus ID: 51776

UniProt ID: [Q9NYL2](#)

Cytogenetics: 2q31.1

Domains: pkinase, TyrKc, SAM, S_TKc

Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: MAPK signaling pathway, Tight junction

Gene Summary: This gene is a member of the MAPKKK family of signal transduction molecules and encodes a protein with an N-terminal kinase catalytic domain, followed by a leucine zipper motif and a sterile-alpha motif (SAM). This magnesium-binding protein forms homodimers and is located in the cytoplasm. The protein mediates gamma radiation signaling leading to cell cycle arrest and activity of this protein plays a role in cell cycle checkpoint regulation in cells. The protein also has pro-apoptotic activity. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1, also referred to as MRK-alpha and MLTK-alpha).