

Product datasheet for **SC307857**

MNK2 (MKNK2) (NM_199054) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: MNK2 (MKNK2) (NM_199054) Human Untagged Clone
Tag: Tag Free
Symbol: MNK2
Synonyms: GPRK7; MNK2
Mammalian Cell Selection: None
Vector: [pCMV6-XL6](#)
E. coli Selection: Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene ORF sequence for NM_199054 edited
 ATGGTGCAGAAGAAACCAGCCGAACCTTCAGGGTTTCCACCGTTTCGTTCAAGGGGCAGAAC
 CCCTTCGAGCTGGCCTTCTCCCTAGACCAGCCGACCACGGAGACTCTGACTTTGGCCTG
 CAGTGCTCAGCCCGCCCTGACATGCCCGCCAGCCAGCCATTGACATCCCGGACGCCAAG
 AAGAGGGGCAAGAAGAAGAAGCGCGCCGGGCCACCGACAGCTTCTCGGGCAGGTTTGAA
 GACGTCTACCAGCTGCAGGAAGATGTGCTGGGGGAGGGCCTCATGCCCGAGTGCAGACC
 TGCATCAACCTGATCACCAGCCAGGAGTACGCCGTCAAGATCATTGAGAAGCAGCCAGGC
 CACATTCGGAGCAGGGTTTTTCAGGGAGGTGGAGATGCTGTACCAGTGCCAGGGACACAGG
 AACGTCTAGAGCTGATTGAGTTCTTCGAGGAGGAGGACCCTTCTACCTGGTGTGGAG
 AAGATGCGGGGAGGCTCCATCCTGAGCCACATCCACAAGCGCCGCACTTCAACGAGCTG
 GAGGCCAGCGTGGTGGTGCAGGACGTGGCCAGCGCCTTGGACTTCTGCATAACAAGGC
 ATCGCCACAGGGACCTAAAGCCGAAAACATCCTCTGTGAGCACCCCAACCAGGTCTCC
 CCCGTGAAGATCTGTGACTTCGACCTGGGCAGCGGCATCAAACCTCAACGGGGACTGCTCC
 CCTATCTCCACCCCGGAGCTGCTCACTCCGTGCGGCTCGGCGGAGTACATGGCCCGGAG
 GTAGTGGAGGCCCTCAGCGAGGAGGCTAGCATCTACGACAAGCGCTGCGACCTGTGGAGC
 CTGGGCGTCATCTGTATATCCTACTCAGCGGCTACCCGCCCTTCGTGGGCCGCTGTGGC
 AGCGACTGCGGCTGGGACCGCGGCGAGGCTGCCCTGCCCTGCCAGAACATGCTGTTTGAG
 AGCATCCAGGAGGGCAAGTACGAGTTCCCGACAAGGACTGGGCCACATCTCCTGCGCT
 GCCAAAGACCTCATCTCCAAGCTGCTGGTCCGTGACGCCAAGCAGAGGCTGAGTGCCGCC
 CAAGTCTGCAGCACCCCTGGGTTTCAGGGTTCGCGCCCGGAGAACACCTTGCCCACTCCC
 ATGGTCTGCAGAGGAACAGCTGTGCCAAAGACCTCACGTCTTCGCGGCTGAGGCCATT
 GCCATGAACCGGCAGCTGGCCAGCAGCAGGAGGCTGGCTGAGGAGGAGGCCGCGGGG
 CAGGGCCAGCCCGTCTGGTCCGAGCTACCTCACGCTGCCTGCAGCTGTCTCCACCCTCC
 CAGTCCAAGCTGGCGCAGCGCGGCAAAGGGCCAGTCTGTCTCGGCCCAAGTGGTCTCTG
 GTGGGAGACCACGCTGACCCTCCCATCTCCCCTCTGTACATAGGTCACCCGTCCCCCAA
 TCAAATCTAAAGTTTTTTAAGCTATCGCCAGCCGGTGTCCAGCGGGCTGCCCTCTCT
 GCCTGGATTCCCAGGCACTAAGCT



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5' Read Nucleotide Sequence:

```
>OriGene 5' read for NM_199054 unedited
TATTACCCCGCCCGTTGGCGCAAAGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAG
CAGAGCTCATTTAGGTGACACTATAGAATACAAGCTACTTGTCTTTTTGCAGCGGCCGC
GAATTCGGCAGCAGGGCCCTCCCCGCTGGCGGGGCCGGACAGAAAGATGGTGCAGAAAGAA
ACCAGCCGAACCTCAGGGTTTCCACCGTTCGTTCAAGGGGCAGAACCCCTTCGAGCTGGC
CTTCTCCCTAGACCAGCCGACCACGGAGACTCTGACTTTGGCCTGCAGTGTCTAGCCCCG
CCCTGACATGCCCGCCAGCCACCCATTGACATCCCGGACGCCAAGAAGAGGGGCAAGAA
GAAGAAGCGCGGGCCGGCCACCGACAGCTTCTCGGGCAGGTTTGAAGACGTCTACCAGCT
GCAGGAAGATGTGCTGGGGGAGGGCGCTCATGCCCGAGTGCAGACCTGCATCAACCTGAT
CACCAGCCAGGAGTACGCCGTCAAGATCATTGAGAAGCAGCCAGGCCACATTCGGAGCAG
GGTTTTCAGGGAGGTGGAGATGCTGTACCAGTGCAGGGACACAGGAACGTCCTAGAGCT
GATTGAGTTCTTCGAGGAGGAGGACCGTCTACTCTGGTGTGTTGAGAAGAGCGGNGAGGC
TCCATCCTGAGCCACATCCACAAGCGCCGCACTTCAACGAGCTGGNAGCCANCGTGGGT
GGTGCAAGNACAGTGCCCAACGCCCTTGGACTTCTGCATAACAAAGGCATCGCCACAG
GGACCTAAAGCCCGAAACATCCTCTGTGAGCACCCCAACAGGTCTCCCGCGAAGGAC
TTGTGACTTCGACCTGGGCAGCGCATCAACTCAACGGGGGACTGGTTCCCTTACTCAAC
CCCGGAGCTGCTACTTCCGGCGGTTCCGGGGAGTAATGCCCCCGG
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3' Read Nucleotide Sequence:

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>OriGene 3' genomic read for NM_199054 unedited
TTACTTGNACCGCGCCGATTCTANNGATCGGTTTTTTTTTTTTTTTTTTGGCTTTTAA
AAACATCGTAACATTAACACATGGCCGTTACCGTCCCCAGCGATGGGAGCTGGCCTGG
GGCCAGGGTCTCCAGGATCTTCACTCATTACAGTAACGGTTCTGACCAGTCTCCAG
GTCGCACGTGGATGCGACAGGGGTGGGGAGGGAGGAAAGTACTGTCCACCTTCAGA
AAAAAAAAAAACAAACAAACAAACAAACGCTGCTAGCCACTCAGCTTTAGAGACCCGATGG
CTATGGGCGCCTGCAGCGGGCGGGGTCCATTTGCTTGTCTTTGATACAAAAGGCAGA
GAATCCCCCGTTACGAAACATGGAATCACTGACAGGCGAGAAGTATGGGGGAAAGGGGT
GGNGCGGAATGCCCAACCCCGGGGTCTTTGGAAGGGGCAGTCCACAGATATGGGC
AGTGGGGACCAGGGAAGGCAGAGCACCCACGGCCACCGGACTGTGACCATCATACGAG
ATTGAGGAGGGGCAGCANGGCCAGGCAGACGGTCTCCGAGGCCCAACCCAGGCCCC
CGACATTCAGTATTCTTCAAGAACAGGGAAGCAAAGTCCATCGATGTGTGTTTTTTTT
TAAAGAAAAACTAAAAACTAAACAGGAGGAAAGAATCCCGACCCGCGGATTTAGAAACC
AGAAGGGCTTGCCCACTGGTGGAGCTCGGGGGCTGCCCCCGAAGGCGGGCGGTGAC
CCTAACCGCGCGCACTTTCTAAAGTGGAACCCCTGGATTGCATAGAACGTTCCACCCGC
CGGGGAGGGGTAGACAGCTCCCAACCCCGGGGTGGAACATGGAGGTGGGGGGGA
ATTGACAAACCCCAATTCTGGGTCCCGAAGGGAGCCAGGCCAACCCCTTTCT
GAAGTAAAAAT
```

Restriction Sites:

NotI-NotI

ACCN:

NM_199054

Insert Size:

3400 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](#)

OTI Annotation: The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.

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_199054.1](#), [NP_951009.1](#)

RefSeq Size: 3795 bp

RefSeq ORF: 1398 bp

Locus ID: 2872

UniProt ID: [Q9HBH9](#)

Cytogenetics: 19p13.3

Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: Insulin signaling pathway, MAPK signaling pathway

Gene Summary:

This gene encodes a member of the calcium/calmodulin-dependent protein kinases (CAMK) Ser/Thr protein kinase family, which belongs to the protein kinase superfamily. This protein contains conserved DLG (asp-leu-gly) and ENIL (glu-asn-ile-leu) motifs, and an N-terminal polybasic region which binds importin A and the translation factor scaffold protein eukaryotic initiation factor 4G (eIF4G). This protein is one of the downstream kinases activated by mitogen-activated protein (MAP) kinases. It phosphorylates the eukaryotic initiation factor 4E (eIF4E), thus playing important roles in the initiation of mRNA translation, oncogenic transformation and malignant cell proliferation. In addition to eIF4E, this protein also interacts with von Hippel-Lindau tumor suppressor (VHL), ring-box 1 (Rbx1) and Cullin2 (Cul2), which are all components of the CBC(VHL) ubiquitin ligase E3 complex. Multiple alternatively spliced transcript variants have been found, but the full-length nature and biological activity of only two variants are determined. These two variants encode distinct isoforms which differ in activity and regulation, and in subcellular localization. [provided by RefSeq, Aug 2011]

Transcript Variant: This variant (2) is the longer transcript and it encodes the longer protein (isoform 2, also known as isoform a), which is located in the cytoplasm and has an MAP kinase-binding region at the C-terminus.