

## Product datasheet for **SC323330**

### **MNK1 (MKNK1) (NM\_003684) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MNK1 (MKNK1) (NM_003684) Human Untagged Clone
Tag:	Tag Free
Symbol:	MNK1
Synonyms:	MNK1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC323330 sequence for NM\_003684 edited (data generated by NextGen Sequencing)

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ATGGTATCTTCTCAAAGTTGGAAAAACCTATAGAGATGGGCAGTAGCGAACCCCTTCCC
ATCGCAGATGGTGACAGGAGGAGGAAGAAGAAGCGGAGGGGCCGGCCACTGACTCCTTG
CCAGGAAAGTTTGAAGATATGTACAAGCTGACCTCTGAATTGCTTGGAGAGGGAGCCTAT
GCCAAAGTTCAAGGTGCCGTGAGCCTACAGAATGGCAAAGAGTATGCCGTCATGATCATC
GAGAAACAAGCAGGGCACAGTCGGAGTAGGGTGTTCGAGAGTGGAGACGCTGTATCAG
TGTCAGGGAACAAGAACAATTTTGGAGCTGATTGAGTTCTTTGAAGATGACACAAGGTTT
TACTTGGTCTTTGAGAAATTGCAAGGAGTTCCATCTTAGCCACATCCAGAAGCAAAAAG
CACTTCAATGAGCGAGAAGCCAGCCGAGTGGTGCGGGACGTTGCTGCTGCCCTTGACTTC
CTGCATACCAAAGACAAAGTCTCTCTGTACCTAGGCTGGAGTGTATGGCGCCATCA
GGGCTCACTGCAGCCCCAACCTCCCTGGGCTCCAGTGATCTCCACCTCAGCCTCCCAA
GTAGCTGGGACTACAGGCATTGCTCATCGTGATCTGAAACCAGAAAATATATTGTGTGAA
TCTCCAGAAAAGGTGTCTCCAGTAAAAATCTGTGACTTTGACTTGGGCAGTGGGATGAAA
CTGAACAACCTCCTGTACCCCATTAACCACACCAGAGCTGACCACCCCATGTGGCTGTGCA
GAATACATGGCCCTGAGGTAGTGGAGGTCTTACGGACCAAGCCACATTCTACGACAAG
CGCTGTGACCTGTGGAGCCTGGGCGTGGTCTCTACATCATGCTGAGTGGCTACCCACCC
TTCGTGGGTCCTGCGGGGCCGACTGTGGCTGGGACCGGGGCGAGGTCTGCAGGGTGTGC
CAGAACAAGCTGTTTGAAGCATCCAGGAAGGCAAGTATGAGTTTCTGACAAGGACTGG
GCACACATCTCCAGTGAAGCCAAAGACCTCATCTCAAGTCTTGGTGGCAGATGCAAAG
CAGAGACTTAGCGCCGCCAAGTCTTGCAGCACCCATGGGTGCAGGGGCAAGCTCCAGAA
AAGGGACTCCCCACGCCCAAGTCTCCAGAGGAACAGCAGCACAAATGGACCTGACGCTC
TTCCGACGTGAGGCCATCGCCCTTAACCGCCAGCTATCTCAGCACGAAGAGAACAAGTCA
GCAGAGGAGCCAGAGGCACTAGCTGATGGCTCTGCTCCATGAAGCTTTCCCTCCCTGC
AAGTACGCCTGCGCCGAGACGGCCCTGGCCAGGCAGGCCGTGGTGAAGACAGGAGC
CCGCCACAGCACTCTGA

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Clone variation with respect to NM\_003684.4  
 233 a=>t;234 a=>g

**5' Read Nucleotide Sequence:** >OriGene 5' read for mutant NM\_003684 unedited

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CCCCCCGTTAGAGCAAAGGGCGGTAGGCGCTGTACGGTGGGAGGCTCTATATAAGCAGAGCTCGTTAG
TGAACCGTCAGAACTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGGCGACCGCTC
CCCCGGCGGAGCCAGCGAAGGTTTCCATGTGACAGGCGGATGGAGAACTGAAGATTGCCACCTACGCACA
AAGGCCATTGAGACACTTCGTGTAGCTGGAAGACACCAACTTCTGACAGGAGCTTTATTTCAATTTGGGA
TTTCAAGTTTACAGATGGTATCTTCTCAAAGTTGGAAAAACCTATAGAGATGGGCAGTAGCGAACCCCT
TCCCATCGCAGATGGTGACAGGAGGAGGAAGAAGAAGCGGAGGGGCCGGCCACTGACTCCTTGCCAGGA
AAGTTTGAAGATATGTACAAGCTGACCTCTGAATTGCTTGGAGAGGGAGCCTATGCCAAAGTTACAGTGC
CGTGAGCCTACAGATGCAAGAGTATGCCGTGATGATCATCGAGAACAGCAGGCACAGTTCGAGTAGGTGTT
CGAAGAGGTGAGACCGCTTGTATCATGTGACAACAGAACATTTGAAGCTGATGAGTTCTTGAATGACC
CAAGTTTACTGTCTTGGAAATTGCAAGGAGTCACTAGCCATTCGAAACCAAAGCCATTGATGACCGAAC
CACCAATGTGTCGGACTTCCGTCTGCCTGAACTTCTCGATCCAAGACAAGGCTCTCTGTGACCTAGCCGG
GATGTCATGCCTAAGGCCTACTGGACCACCCCTGTGATAGTATCCAACCTCAGCCTCAGATGATCGGGA
TCAGAATTGCCATGTTATCGAACAGATATTGTGACTCCGAAAGTCCCTGGAATGCGTCACTAGCGCG
AGTGACGAGCAATCTG

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**Kinase Domain Sequence:** >SC323330 kinase domain raw sequence. By performing [BLASTX](#) analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation

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CYATGMCAATGGGCGGTAGGCKGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTGTGAACCGTCA
GAATTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGGCGACCGCTCCCCGGCGGGA
GCCAGCGAAGGTTTCCATGTGACAGGCGGATGGAGAACTGAAGATTGCCACCTACGCACAAGGCCATTG
AGACACTTCGTGTAGCTGGAAGACACCAACTTCTGACAGGAGCT

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<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_003684
<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	<p>This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." <a href="#">Cell. 2008 May p536-548.</a></p>
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_003684.3</a> , <a href="#">NP_003675.2</a>
<b>RefSeq Size:</b>	2736 bp
<b>RefSeq ORF:</b>	1398 bp
<b>Locus ID:</b>	8569
<b>UniProt ID:</b>	<a href="#">Q9BUB5</a>
<b>Cytogenetics:</b>	1p33
<b>Domains:</b>	pkinase, TyrKc, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	Insulin signaling pathway, MAPK signaling pathway

**Gene Summary:**

This gene encodes a Ser/Thr protein kinase that interacts with, and is activated by ERK1 and p38 mitogen-activated protein kinases, and thus may play a role in the response to environmental stress and cytokines. This kinase may also regulate transcription by phosphorylating eIF4E via interaction with the C-terminal region of eIF4G. Alternatively spliced transcript variants have been noted for this gene. [provided by RefSeq, Jan 2012]

Transcript Variant: This variant (1) encodes the longest isoform (1). CCDS Note: The coding region has been updated to scale back the N-terminus to one that is more supported by the available transcript data and by conservation across mammals.