

## Product datasheet for **SC323539**

### **Mps1 (TTK) (NM\_003318) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Mps1 (TTK) (NM_003318) Human Untagged Clone
Tag:	Tag Free
Symbol:	Mps1
Synonyms:	CT96; ESK; MPH1; MPS1; MPS1L1; PYT
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC323539 sequence for NM\_003318 edited (data generated by NextGen Sequencing)

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ATGGAATCCGAGGATTTAAGTGGCAGAGAATTGACAATTGATTCCATAATGAACAAAGTG
AGAGACATTAATAAAGTTTAAAAATGAAGACCTTACTGATGAAGCTTGAATAAA
ATTTCTGCTGATACTACAGATAACTCGGGAAGTAAACCAAATTATGATGATGGCAAAC
AACCCAGAGGACTGGTTGAGTTTGTGCTCAAAGTACAGTCAAGCAATTGAAGCGCTTCCCCA
GATGCTCTTTTAAATAAATTGATTGGTGTACAGTCAAGCAATTGAAGCGCTTCCCCA
GATAAATATGGCCAAAATGAGAGTTTGTGCTAGAATTCAGTGAAGTTTGTGCTGAATTAATA
GCTATTCAAGAGCCAGATGATGCACGTGACTACTTTCAAATGGCCAGAGCAAAGTCAAG
AAATTTGCTTTTGTTCATATATCTTTTGCACAATTTGAACTGTCACAAGGTAATGTCAA
AAAAGTAAACAACCTTCTTCAAAAAGCTGTAGAACGTGGAGCAGTACCACTAGAAATGCTG
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AAGAATTTATCAGCATCTACGGTATTAAGTCCCAAGAATCATTTTCCGGTTCACCTGGG
CATTTACAGAATAGGAACAACAGTTGTGATTCCAGAGGACAGACTACTAAAGCCAGGTTT
TTATATGGAGAGAACATGCCACCACAAGATGCAGAAATAGTTACCGGAATTCATTGAGA
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AGCCCAGATTGTGATGTGAAGACAGATGATTCAGTTGTACCTTGTATGAAAAGACAA
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CAGGTGTTAAATGAAAAGAAACAGATATGCTATAAAATATGTGAAGTGAAGAAGCA
GATAACCAAACTCTTGATAGTTACCGGAACGAAATAGCTTATTTGAATAAACTACAACA
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CATGGCATTGTTACAGTGTCTTAAACCAAGCTAACTTTCTGATAGTTGATGGAATGCTA
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GATTCTCAGGTTGGCACAGTTAATTATATGCCACCAGAAGCAATCAAAGATATGTCTTCC
TCCAGAGAGAATGGGAAATCTAAGTCAAAGATAAGCCCCAAAAGTGTGTTTGGTCTTA
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ATTTCTAAATTACATGCCATAATTGATCCTAATCATGAAATTGAATTTCCCGATATTCCA
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TCCATTCTGAGCTCCTGGCTCATCCATATGTTCAAATTCAAACTCATCCAGTTAACCAA
ATGGCCAAGGGAACCACTGAAGAAATGAAATATGTTCTGGGCCAAGTGTGTTGCTGAAT
TCTCCTAACTCCATTTTGAAGCTGCTAAAATTTATATGAACACTATAGTGGTGGTGAA
AGTCATAATCTTCATCTCCAAGACTTTTGAAGAAAAAGGGGAAAAAATGA

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Clone variation with respect to NM\_003318.4

<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for mutant NM_003318 unedited CCC GCC GTT GAG CAAT GGG CGG TAG GCG TGT ACG GTG GG GAG TCT AT ATA AAG CAG AGCT CAT TTAG GTGA CACT ATAGA ATACA AGCT ACT TGT TCT TTT TGC AGC GCG CGC GAAT C GGC AC GAG GGT AGA AAT GGA ATC CG AGG ATTT AAG TGG CAG AGA ATT GACA ATT GATT CCATA AAT GAAC AAAG TGA GAG ACAT TAAAA TAAG TTT AAAAT GAAG ACCTT ACTGAT GAAC TAAG CTT GAATA AAAAT TCTGCTGATACTACAGATAACTCGG GA ACTGTTAACCA AATTATGATGATGGCAAACAACCC CAGAGGACTGGTTGAGTTTTGTTGCTCAA ACT AGAGAAAACAGTGGTTCCGCTAAGTGATGCTCTTTTTAAAATAAATTGATTGGTCGGTTACAGTCAAGC AATTGAAGCGCTTCCCCAGATAAAAATGGCCAAAATGAGAGTTTTGCTAGAATTCAGGTGGAGATTTGC TGATTTAAAAGCTATTCAGAACCAGATGATGCACGTGATACTTTTCAATTGGCCGAACAAACGCCAGGA ATTTGCCTTTTGTCCATATCCTTTTGC AAATTGAAACGGCACCAAGGTAGGCCAAAAAAGATAAACATTT TCTCAAACCTGTAAAGTGTGGAGATCCCACTAAAGTGTGGAATTGCCCGGATTTACCCTCAAAGCT CGTTTCAGAGAGAAGAATTTACGCTCCGGTATGCGCGAAACTTCGTGCTTGGCTTCAAATAGACTGT GATCGAGAGCACTATCTAGCGCTTTATGGAGACTCGCCCGAGCGCAAGGTGCCGATTTGGAACATAC TACGCTGCTGTGAAACCTATCTAGCCTGTGTGCCACT
<b>Kinase Domain Sequence:</b>	>SC323539 kinase domain raw sequence. By performing <a href="#">BLASTX</a> analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation TMATTAAGCAGATAGGAKGGAGTTTCAGCAAGTATTTTCAGTGTAAATGAAAAGAAACAGATATATGC TATAATGTATGTGAACCTAGAAGAAGCAGATAACCAACTCTTGATAGTTACCGGAACGAAATAGCTTAT TTGAATAAACTACAACAACACAGTGATAAGATCATCCGACTTTATGATTATGAAATCACGGACCAGTACA TCTACATGGTAATGGAGTGTGAAATATTGATCTTAATAGTTGGC
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_003318
<b>Insert Size:</b>	2900 bp
<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	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>
<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_003318.3</a> , <a href="#">NP_003309.2</a>

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RefSeq Size:	2984 bp
RefSeq ORF:	2574 bp
Locus ID:	7272
UniProt ID:	<a href="#">P33981</a>
Cytogenetics:	6q14.1
Domains:	pkinase, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Cell cycle, Oocyte meiosis, TGF-beta signaling pathway, Ubiquitin mediated proteolysis, Wnt signaling pathway
Gene Summary:	<p>This gene encodes a dual specificity protein kinase with the ability to phosphorylate tyrosine, serine and threonine. Associated with cell proliferation, this protein is essential for chromosome alignment at the centromere during mitosis and is required for centrosome duplication. It has been found to be a critical mitotic checkpoint protein for accurate segregation of chromosomes during mitosis. Tumorigenesis may occur when this protein fails to degrade and produces excess centrosomes resulting in aberrant mitotic spindles. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Nov 2009]</p> <p>Transcript Variant: This variant (1) represents the shorter transcript and encodes the longer isoform (1).</p>