

Product datasheet for **RG200093**

Mps1 (TTK) (NM_003318) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mps1 (TTK) (NM_003318) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mps1
Synonyms:	CT96; ESK; MPH1; MPS1; MPS1L1; PYT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG200093 representing NM_003318
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAATCCGAGGATTTAAGTGGCAGAGAATTGACAATTGATTCCATAATGAACAAAGTGAGAGACATTA
 AAAATAAGTTTAAAAATGAAGACCTTACTGATGAACTAAGCTTGAATAAAATTTCTGCTGACTACAGA
 TAACTCGGGAAGTAAACCAAATTATGATGATGGCAAACAACCCAGAGGACTGGTTGAGTTTGTGCTC
 AAAGTAAAGCTATTCAAGAGCCAGATGATGCACGTGACTCTTTAAATAAATTGATTGGTCGTTACAGTCAAG
 CAATTGAAGCGCTTCCCCAGATAAATATGGCCAAAATGAGAGTTTTGCTAGAATTCAAGTGAAGTTTGC
 TGAATTAAGCTATTCAAGAGCCAGATGATGCACGTGACTCTTTCAAATGGCCAGAGCAAAGTCAAG
 AAATTTGCTTTTGTTCATATATCTTTGCACAATTTGAACTGTCACAAGTAATGTCAAAAAAGTAAAC
 AACTTCTTCAAAAAGCTGTAGAAGCTGGAGCAGTACCCTAGAAATGCTGGAATTTGCCCTGCGGAATTT
 AAACCTCAAAAAAGCAGCTGCTTTCCAGAGGAGAAAAGAAGATTTATCAGCATCTACGGTATTAAGT
 GCCCAAGAATCATTTTCCGGTTCAGTTGGGCATTTACAGAATAGGAACAACAGTTGTGATTCCAGAGGAC
 AGACTACTAAAGCCAGGTTTTATATGGAGAGAACATGCCACCACAAGATGCAGAAATAGGTTACCGGAA
 TTCATTGAGACAAACTAACAAAATAACAGTCATGCCCATTTGGAAGAGTCCCAGTTAACCTTCTAAAT
 AGCCCAGATTGTGATGTGAAGACAGATGATTGAGTTGTACCTTGTTTTATGAAAAGACAAACCTCTAGAT
 CAGAATGCCGAGATTTGGTTGTGCTGGATCTAAACCAAGTGGAAATGATTCTGTGAATTAAGAAATTT
 AAAGTCTGTTCAAATAGTCATTTCAAGGAACCTCTGGTGTGAGTAAAAGAGTTCTGAACTTATTATT
 ACTGATCAATAACCCGAAGAATAAACCGAATCAAGTCTTAGCTAAATTAAGAACTAAAGAGT
 ATCAAGAACCAGAGGTTCCAGAGAGTAACCGAACAACAGTGGCAATCTAAGAGAAAGTCAAGTGTATTAA
 CCAGAATCTGCTGCATCTTCAAATCACTGGCAGATTCGGAGTTAGCCGAAAAGTAAATACAGAGCAG
 AAACATACCAGTTTGTGCAACCTGTCTTTTCAAGTTTCAAACAGTCAACCAATATCAACATCTAAAT
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 AACTCCAGTTGTAAGAATGACTTTCCACCTGCTGTGCAAGTGTCAACACCTTATGGCAACCTGCCTGT
 TTCCAGCAGCAACAGCATCAAATACTTCCACTCCACTTCAAATTTACAGGTTTATGATCTTCTTCAG
 CAAATGAATGCATTTCCGTTAAAGGAAGAATTTATCCATTTAAAGCAGATAGGAAGTGGAGTTCAAG
 CAAGGTATTTAGGTGTTAAATGAAAAGAAACAGATATGCTATAAAATATGTGAACCTAGAAGAAGCA
 GATAACCAAACTCTTGATAGTTACCGGAACGAAATAGCTTATTTGAATAAACTACAACAACACAGTGATA
 AGATCATCCGACTTTATGATTATGAAATCACGGACCAGTACATCTACATGGTAATGGAGTGTGGAATAT
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 ATGTTAGAGGCAGTTCACACAATCCATCAACATGGCATTGTTACAGTGTCTTAAACCAGCTAACTTTC
 TGATAGTTGATGGAAATGCTAAAGCTAATTGATTTGGGATTGCAAACCAATGCAACCAGATACAACAAG
 TGTTGTTAAAGATTCTCAGGTTGGCACAGTTAATTATATGCCACCAGAAGCAATCAAAGATATGCTTCC
 TCCAGAGAGAATGGGAAATCTAAGTCAAAGATAAGCCCCAAAAGTATGTTTGGTCTTAGGATGATTT
 TGTACTATGACTTACGGGAAAACACCATTTCCAGCAGATAATTAATCAGATTTCTAAATTACATGCCAT
 AATTGATCCTAATCATGAAATTTGAATTTCCCGATTTCCAGAGAAAGATCTTCAAGATGTGTTAAAGTGT
 TGTTTAAAAAGGACCCAAAACAGAGGATATCCATTCTGAGCTCCTGGCTCATCCCTATGTTCAAATTC
 AAACCTATCCAGTTAACCAAATGGCCAAGGAACCACTGAAGAAATGAAATATGTTCTGGGCCAACTGT
 TGGTCTGAATTTCTCAACTCCATTTTGAAGCTGCTAAAATTTATATGAACACTATAGTGGTGGTGA
 AGTCATAATTTCTCATCTCCAAGACTTTTGAAAAAAAGGGGAAAAA

ACGGTACGCGGCCGCTCGAG – GFP Tag – **GTTTAA**

Protein Sequence: >RG200093 representing NM_003318
Red=Cloning site Green=Tags(s)

MESEDLSGREL TIDSIMNKVRDIKNKFKNEDLTDEL SLNKISADTTDNSGTVNQIMMMANNPEDWLSLLL
KLEKNSVPLSDALLNKLIGRYSQAIEALPPDKYQNESFARIQVRF AELKAIQEPDDARDYFQMARANCK
KFAFVHISFAQFELSQGNVKKSKQLLQKAVERGAVPLEMLEIALRNLNLQKKQLLSEEEKNL SASTVLT
AQESFSGSLGHLQNRNNSCDSRGQTTKARFLYGENMPPQDAEIGYRNSLRQTNKTKQSCPFG RVPVNLN
SPDCDVKTDDSVVPCFMKRQTSRSECRDLVVP GSKPSGNDSCELRNLKSVQNSHFKEPLVSDEKSSELII
TDSITLKNKTESSLLAKLEETKEYQEPEVPESNQKQWQSKRKSECINQNPAASSNHWQIPELARKV NTEQ
KHTTFEQPVFVSKQSPPISTSKWFDPKSICKTPSSNTLDDYMSCFRTPVVKNDFFPACQLSTPYGQPAC
FQQQQHQILATPLQNLQVLASSANECISVKGRIYSILKQIGSGGSSKVFQVLNEKKQIYAIKYV NLEEA
DNQTLDSYRNEIAYLNKLQQHSDKIIRLYDYEITDQYIYMMECGNIDLNSWLKKKSIDPWERKSYWKN
MLEAVHTIHQHGIVHSDLK PANFLIVDGM LKLIDFGIANQMOPD TTSVVKDSQVGTVNYMPPEAIKDMSS
SRENGKSKSKISPKSDVWSLGCILYYMTYGKTPFQQIINQISKLHAIIDPNHEIEFPDIPEKDLQDV LKC
CLKRDPKQRISIPPELLAHPYVQIQTHPVNQMAKGTTEEMKYVLGQLVGLNSPNSILKAAK TLYEHYSGGE
SHNSSSKTFEKKRGKK

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-Mlul

Cloning Scheme:



ACCN: NM_003318

ORF Size: 2571 bp

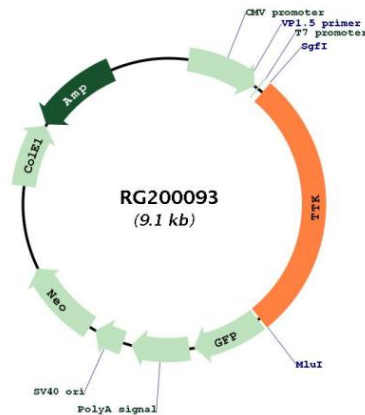
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	<ol style="list-style-type: none"> 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_003318.3 , NP_003309.2
RefSeq Size:	2984 bp
RefSeq ORF:	2574 bp
Locus ID:	7272
UniProt ID:	P33981
Cytogenetics:	6q14.1
Domains:	pkinese, 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>

Product images:



Circular map for RG200093