

## **Product datasheet for RC224963**

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## MPST (NM\_001013440) Human Tagged ORF Clone

**Product data:** 

**Product Type:** Expression Plasmids

**Product Name:** MPST (NM\_001013440) Human Tagged ORF Clone

Tag: Myc-DDK
Symbol: MPST

Synonyms: 3-mercaptopyruvate sulfurtransferase; human liver rhodanese; mercaptopyruvate

sulfurtransferase; MGC24539; MST; MST, TST2, MGC24539; OTTHUMP00000028670; TST2

Mammalian Cell

Selection:

Neomycin

Vector:pCMV6-Entry (PS100001)E. coli Selection:Kanamycin (25 ug/mL)ORF Nucleotide>RC224963 ORF sequence

Sequence: Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

ATGGCTTCGCCGCAGCTCTGCCGCGCGCTGGTGTCCGGCGCAATGGGTGGCGGAGGCGCTGCGGGCCCCGC
GCGCTGGGCAGCCTCTGCAGCTGCTGGACGCCTCCTGGTACCTGCCGAAGCTGGGGCGCGACGCGCACC
CGAGTTCGAGGAGCCCACATCCCGGGCCGCCGCTTTCTTCGACATCGACCAGTGCAGCGACCGCACCTCG
CCCTACGACCACATGCTGCCCGGGGCCGAGCATTTCGCGGAGTACGCAGGCCGCCTGGGCGTGGGCGCG
CCACCCACGTCGTGATCTACGACCGAGCCACCAGGGCCTCTACTCCGCCCCGCGCGTCTGGTGGATGTT
CCGCGCCTTCGGCCACCACGCCGTGTCACTGCTTGATGGCGGCCTCCGCCACTGGCCGCCAGAACCTC
CCGCTCAGCTCCGGCAAGAGCCAACCTGCTCCCGCCGAGTTCCGCGCCACTCGACCCCGCCTTCATCA
AGACCTACGAGGACATCAAGGAGAACCTGGAATCCCGGCGCTTCCAGGTGGTGACCCCGCCACTGG
CAGGTTCCGCGGCACCGAGCCCCGAGACCGCACTTGAACCTTGCCACACTCCCAGGTACCGTGAAC
ATCCCCTTCACAGACTTCCTGAGCCAGGAGGGGCTGGAGAAGACCCTGAGGAGATCCGCCATCTGTTCC
AGGAGAAAAGTGGACCTGTCTAAGCCACTGGTGGCCACGTTGGCTCCTGGCGTCACAGCCTGCCACGT
GCCACTAGGGGCCTACCTCTGCGGCAAGCCAGACGTGCCCATCTACGATGGCTCCTGGGTGGAGTGCCACAT
ATGCGCCCCCGGCCCGAGGATGTCATCTCAGAGGGCCGGGGAAGACCCAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATTACAAGGATGACGACGATAAGGTTTAA





**Protein Sequence:** >RC224963 protein sequence

Red=Cloning site Green=Tags(s)

MASPQLCRALVSAQWVAEALRAPRAGQPLQLLDASWYLPKLGRDARREFEERHIPGAAFFDIDQCSDRTS PYDHMLPGAEHFAEYAGRLGVGAATHVVIYDASDQGLYSAPRVWWMFRAFGHHAVSLLDGGLRHWLRQNL PLSSGKSQPAPAEFRAQLDPAFIKTYEDIKENLESRRFQVVDSRATGRFRGTEPEPRDGIEPGHIPGTVN IPFTDFLSQEGLEKSPEEIRHLFQEKKVDLSKPLVATCGSGVTACHVALGAYLCGKPDVPIYDGSWVEWY MRARPEDVISEGRGKTH

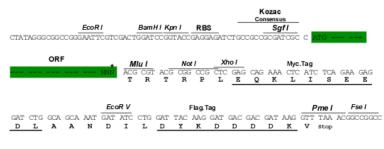
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: <a href="https://cdn.origene.com/chromatograms/mk6421\_d03.zip">https://cdn.origene.com/chromatograms/mk6421\_d03.zip</a>

**Restriction Sites:** Sgfl-Mlul

Cloning Scheme:





<sup>\*</sup> The last codon before the Stop codon of the ORF

**ACCN:** NM\_001013440

ORF Size: 891 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:** 

- 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: <u>NM 001013440.1</u>, <u>NP 001013458.1</u>

RefSeq Size: 1626 bp
RefSeq ORF: 893 bp
Locus ID: 4357
Cytogenetics: 22q12.3

**Protein Families:** Druggable Genome

**Protein Pathways:** Cysteine and methionine metabolism, Metabolic pathways

MW: 33.2 kDa

Gene Summary: This protein encoded by this gene catalyzes the transfer of a sulfur ion from 3-

mercaptopyruvate to cyanide or other thiol compounds. It may be involved in cysteine degradation and cyanide detoxification. There is confusion in literature between this protein

(mercaptopyruvate sulfurtransferase, MPST), which appears to be cytoplasmic, and

thiosulfate sulfurtransferase (rhodanese, TST, GeneID:7263), which is a mitochondrial protein.

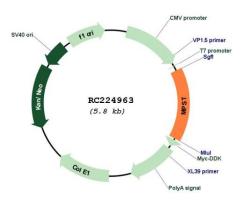
Deficiency in MPST activity has been implicated in a rare inheritable disorder known as mercaptolactate-cysteine disulfiduria (MCDU). Alternatively spliced transcript variants encoding same or different isoforms have been identified for this gene. [provided by RefSeq,

ricoding same of different isoforms have been identified for this gene. [provided by

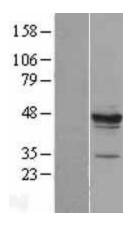
Jul 2008]



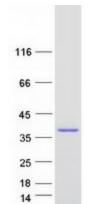
## **Product images:**



Circular map for RC224963



Western blot validation of overexpression lysate (Cat# [LY427224]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC225408] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MPST protein (Cat# [TP324963]). The protein was produced from HEK293T cells transfected with MPST cDNA clone (Cat# RC224963) using MegaTran 2.0 (Cat# [TT210002]).