

## Recombinant Human MOCS3, His-tagged

Cat. No. MOCS3-143H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human Adenylyltransferase and Sulfurtransferase MOCS3/MOCS3 is produced by our mammalian expression system in human cells. The target protein is expressed with sequence (Met1-Tyr460) of Human MOCS3 fused with a polyhistidine tag at the C-terminus.

**Species** Human

**Source** HEK293

**ProteinLength** 1-460 a.a.

**Description** Adenylyltransferase and Sulfurtransferase MOCS3 (MOCS3) is a member of the hesA/moeB/thiF family. MOCS3 contains one Molybdopterin-synthase adenylyltransferase domain and one Molybdopterin-synthase sulfurtransferase domain. MOCS3 plays an important role in 2-thiolation of mcm5S2U at tRNA wobble positions of tRNA(Lys), tRNA(Glu) and tRNA(Gln), MOCS3 is essential for biosynthesis of the molybdenum cofactor. MOCS3 can interact with NFS1, which may act as a sulfur donor for thiocarboxylation reactions.

**AA Sequence** MASREEVLALQAEVAQREEELNSLKQKQLASALLAEQEPQPERLVPVSPLPPKAALSR  
DEILRYSR QLVLPGLVHGQLRLGTACVLIVGCGGLGCPLAQYLAAAGVGRGLVD  
YDVVEMSNLARQVLHGE ALAGQAKAFSAAASLRRLNSAVECVPYTQALTPATALDL  
VRRYDVVADCSNVPTRYLVNDACVL AGRPLVSASALRFEGQITVYHYDGGPCYR  
CIFPQPPAETVTNCADGGVLGVVTGVLGCLQALEV LKIAAGLGPSYSGSLLLFDAL

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RGHFRSIRLRSRRLDCAACGERPTVTDLLDYEAFCGSSATDKCR SLQLLSPEERVS  
 VTDYKRLLD SGAFHLLLDV RPQVEVDICRLPHALHIPLKHLERRDAESLKLLK EAIWE  
 EKQGTQEGAAVPIYVICKLGNDSQKAVKILQSLSAAQELDPLTVRDVVGGLMAWAAK  
 IDG TFPQYVDHHHHHH

**Endotoxin** Less than 0.1 ng/μg (1 IEU/μg).

**Purity** Greater than 95% as determined by SEC-HPLC and reducing SDS-PAGE.

## GENE INFORMATION

**Gene Name** [MOCS3 molybdenum cofactor synthesis 3 \[ Homo sapiens \]](#)

**Official Symbol** MOCS3

**Synonyms** MOCS3; molybdenum cofactor synthesis 3; adenylyltransferase and sulfurtransferase  
 MOCS3; dJ914P20.3; UBA4; ubiquitin activating enzyme E1 homolog (yeast);  
 ubiquitin like modifier activating enzyme 4; MPT synthase sulfurylase; molybdopterin  
 synthase sulfurylase; molybdenum cofactor synthesis protein 3; ubiquitin-like modifier  
 activating enzyme 4; UBA4, ubiquitin-activating enzyme E1 homolog; MGC9252;

**Gene ID** [27304](#)

**mRNA Refseq** [NM\\_014484](#)

**Protein Refseq** [NP\\_055299](#)

**MIM** [609277](#)

**UniProt ID** [O95396](#)

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**Chromosome  
Location**

20q13.13

**Pathway**

Metabolism, organism-specific biosystem; Metabolism of vitamins and cofactors, organism-specific biosystem; Metabolism of water-soluble vitamins and cofactors, organism-specific biosystem; Molybdenum cofactor biosynthesis, organism-specific biosystem; Sulfur relay system, organism-specific biosystem; Sulfur relay system, conserved biosystem; molybdenum cofactor biosynthesis, conserved biosystem;

**Function**

ATP binding; URM1 activating enzyme activity; metal ion binding; nucleotide binding; nucleotidyltransferase activity; protein binding; sulfurtransferase activity; sulfurtransferase activity; thiosulfate sulfurtransferase activity; transferase activity;

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