

## Recombinant Mouse Mocs3 Protein, Myc/DDK-tagged

**Cat. No.** Mocs3-4110M    **Lot. No.** (See product label)

### SPECIFICATION

|                         |  |
|-------------------------|--|
| <b>Product Overview</b> | Purified recombinant protein of mouse full-length molybdenum cofactor synthesis 3 (Mocs3), with C-terminal MYC/DDK tag, expressed in HEK293T cells.  |
| <b>Species</b>          | Mouse  |
| <b>Source</b>           | HEK293   |
| <b>Description</b>      | Plays a central role in 2-thiolation of mcm5S2U at tRNA wobble positions of cytosolic tRNA(Lys), tRNA(Glu) and tRNA(Gln). Also essential during biosynthesis of the molybdenum cofactor. Acts by mediating the C-terminal thiocarboxylation of sulfur carriers URM1 and MOCS2A. Its N-terminus first activates URM1 and MOCS2A as acyl-adenylates (-COAMP), then the persulfide sulfur on the catalytic cysteine is transferred to URM1 and MOCS2A to form thiocarboxylation (-COSH) of their C-terminus. The reaction probably involves hydrogen sulfide that is generated from the persulfide intermediate and that acts as nucleophile towards URM1 and MOCS2A. Subsequently, a transient disulfide bond is formed. Does not use thiosulfate as sulfur donor; NFS1 probably acting as a sulfur donor for thiocarboxylation reactions. |
| <b>Molecular Mass</b>   | 49.4 kDa   |
| <b>Purity</b>           | > 80% as determined by SDS-PAGE and Coomassie blue staining  |
| <b>Stability</b>        | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.  |

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|-------------------------|---|
| <b>Storage</b>          | Store at -80 centigrade after receiving vials.  |
| <b>Concentration</b>    | >50 µg/mL as determined by microplate BCA method  |
| <b>Storage Buffer</b>   | 25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.   |
| <b>GENE INFORMATION</b> |   |
| <b>Gene Name</b>        | Mocs3 molybdenum cofactor synthesis 3 [ Mus musculus (house mouse) ]  |
| <b>Official Symbol</b>  | Mocs3   |
| <b>Synonyms</b>         | MOCS3; molybdenum cofactor synthesis 3; adenylyltransferase and sulfurtransferase<br>MOCS3; MPT synthase sulfurylase; molybdopterin synthase sulfurylase; molybdenum<br>cofactor synthesis protein 3; Uba4; 1700020H17Rik |
| <b>Gene ID</b>          | 69372   |
| <b>mRNA Refseq</b>      | NM_001160330  |
| <b>Protein Refseq</b>   | NP_001153802  |
| <b>UniProt ID</b>       | A2BDX3  |

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