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MOCS3 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP19278a

Specification

MOCS3 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession O95396

MOCS3 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 27304

Other Names
Adenylyltransferase and sulfurtransferase MOCS3 {ECO:0000255|HAMAP-Rule:MF_03049}, Molybdenum cofactor synthesis protein 3 {ECO:0000255|HAMAP-Rule:MF_03049}, Molybdopterin synthase sulfurylase, MPT synthase sulfurylase, Molybdopterin-synthase adenylyltransferase {ECO:0000255|HAMAP-Rule:MF_03049}, 27780 {ECO:0000255|HAMAP-Rule:MF_03049}, Adenylyltransferase MOCS3 {ECO:0000255|HAMAP-Rule:MF_03049}, Sulfur carrier protein MOCS2A adenylyltransferase {ECO:0000255|HAMAP-Rule:MF_03049}, Molybdopterin-synthase sulfurtransferase {ECO:0000255|HAMAP-Rule:MF_03049}, 28111 {ECO:0000255|HAMAP-Rule:MF_03049}, Sulfur carrier protein MOCS2A sulfurtransferase {ECO:0000255|HAMAP-Rule:MF_03049}, Sulfurtransferase MOCS3 {ECO:0000255|HAMAP-Rule:MF_03049}, MOCS3 {ECO:0000255|HAMAP-Rule:MF_03049}

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MOCS3 Antibody (N-term) Blocking Peptide - Protein Information

Name MOCS3 {ECO:0000255|HAMAP-Rule:MF_03049}

Function
Plays a central role in 2-thiolation of mcm(5)S(2)U at tRNA wobble positions of cytosolic tRNA(Lys), tRNA(Glu) and tRNA(Gln) (PubMed:19017811, PubMed:22453920, PubMed:30817134). Also essential during biosynthesis of the molybdenum cofactor (PubMed:15073332, PubMed:22453920, PubMed:30817134). Acts by mediating the C-terminal thiocarboxylation of sulfur carriers URM1 and MOCS2A

(PubMed:15073332, PubMed:19017811, PubMed:22453920). 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 (PubMed:19017811, PubMed:22453920). The reaction probably involves hydrogen sulfide that is generated from the persulfide intermediate and that acts as a nucleophile towards URM1 and MOCS2A (PubMed:15073332, PubMed:22453920). Subsequently, a transient disulfide bond is formed (PubMed:15073332, PubMed:22453920). Does not use thiosulfate as sulfur donor; NFS1 acting as a sulfur donor for thiocarboxylation reactions (PubMed:18650437, PubMed:22453920).

Cellular Location
Cytoplasm, cytosol

MOCS3 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

MOCS3 Antibody (N-term) Blocking Peptide - Images

MOCS3 Antibody (N-term) Blocking Peptide - Background

Molybdenum cofactor (MoCo) is necessary for the functionof all molybdoenzymes. One of the enzymes required for thebiosynthesis of MoCo is molybdopterin synthase (MPT synthase). Theprotein encoded by this gene adenylates and activates MPT synthase.This gene contains no introns. A pseudogene of this gene is presenton chromosome 14.

MOCS3 Antibody (N-term) Blocking Peptide - References

Schlieker, C.D., et al. Proc. Natl. Acad. Sci. U.S.A. 105(47):18255-18260(2008)Marelja, Z., et al. J. Biol. Chem. 283(37):25178-25185(2008)Schmitz, J., et al. Biochemistry 47(24):6479-6489(2008)Krepinsky, K., et al. FEBS J. 274(11):2778-2787(2007)Matthies, A., et al. Biochemistry 44(21):7912-7920(2005)