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MOCS3 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19278a

Product Information

Application	WB, E
Primary Accession	O95396
Other Accession	A2BDX3, NP_055299.1
Reactivity	Human, Mouse
Predicted	Rat, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB38898
Calculated MW	49669
Antigen Region	40-66

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}
Target/Specificity	This MOCS3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 40-66 amino acids from the N-terminal region of human MOCS3.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions	MOCS3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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

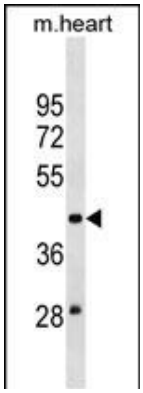
Background

Molybdenum cofactor (MoCo) is necessary for the function of all molybdoenzymes. One of the enzymes required for the biosynthesis of MoCo is molybdopterin synthase (MPT synthase). The protein encoded by this gene adenylates and activates MPT synthase. This gene contains no introns. A pseudogene of this gene is present on chromosome 14.

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)

Images



MOCS3 Antibody (N-term)(Cat. #AP19278a) western blot analysis in mouse heart tissue lysates (35ug/lane).This demonstrates the MOCS3 antibody detected the MOCS3 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.