10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

HMOF/MYST1 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP1114b

Specification

HMOF/MYST1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q9H7Z6

HMOF/MYST1 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 84148

Other Names
Histone acetyltransferase KAT8, Lysine acetyltransferase 8, MOZ, YBF2/SAS3, SAS2 and TIP60 protein 1, MYST-1, hMOF, KAT8, MOF, MYST1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP1114b was selected from the C-term region of human HMOF/MYST1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

HMOF/MYST1 Antibody (C-term) Blocking Peptide - Protein Information

Name KAT8 {ECO:0000303|PubMed:33657400, ECO:0000312|HGNC:HGNC:17933}

Function
Histone acetyltransferase that catalyzes histone H4 acetylation at 'Lys-5'- and 'Lys-8' (H4K5ac and H4K8ac) or 'Lys-16' (H4K16ac), depending on the context (PubMed:12397079, PubMed:16227571, PubMed:16543150, PubMed:20018852, PubMed:21217699, PubMed:22020126, PubMed:22547026, PubMed:31794431, PubMed:33837287). Catalytic

component of the MSL histone acetyltransferase complex, a multiprotein complex that mediates the majority of histone H4 acetylation at 'Lys-16' (H4K16ac), an epigenetic mark that prevents chromatin compaction (PubMed:12397079, PubMed:16227571, PubMed:16543150, PubMed:21217699, PubMed:22020126, PubMed:22547026, PubMed:33657400, PubMed:33837287). H4K16ac constitutes the only acetylation mark intergenerationally transmitted and regulates key biological processes, such as oogenesis, embryonic stem cell pluripotency, hematopoiesis or glucose metabolism (By similarity). The MSL complex is required for chromosome stability and genome integrity by maintaining homeostatic levels of H4K16ac (PubMed:33837287). The MSL complex is also involved in gene dosage by promoting up-regulation of genes expressed by the X chromosome (By similarity). X up-regulation is required to compensate for autosomal biallelic expression (By similarity). The MSL complex also participates in gene dosage compensation by promoting expression of Tsix non-coding RNA (By similarity). As part of the NSL histone acetyltransferase complex, catalyzes histone H4 acetylation at 'Lys-5'- and 'Lys-8' (H4K5ac and H4K8ac) at transcription start sites and promotes transcription initiation (PubMed:20018852, PubMed:22547026, PubMed:33657400). The NSL complex also acts as a regulator of gene expression in mitochondria: KAT8 associates with mitochondrial DNA and controls expression of respiratory genes in an acetyltransferase- dependent mechanism (PubMed:27768893). Also functions as an acetyltransferase for non-histone targets, such as ALKBH5, COX17, IRF3, KDM1A/LSD1, LMNA, PAX7 or TP53/p53 (PubMed:17189187, PubMed:19854137, PubMed:37369679). Acts as an inhibitor of antiviral immunity by acetylating IRF3, preventing IRF3 recruitment to promoters (By similarity). Acts as a regulator of asymmetric division in muscle stem cells by mediating acetylation of PAX7 (By similarity). As part of the NSL complex, acetylates TP53/p53 at 'Lys-120' (PubMed:17189187, PubMed:19854137). Acts as a regulator of epithelial-to-mesenchymal transition as part of the NSL complex by mediating acetylation of KDM1A/LSD1 (PubMed:27292636). The NSL complex is required for nuclear architecture maintenance by mediating acetylation of LMNA (By similarity). Promotes mitochondrial integrity by catalyzing acetylation of COX17 (By similarity). In addition to protein acetyltransferase activity, able to mediate protein propionylation (PubMed:29321206).

Cellular Location
Nucleus. Chromosome Mitochondrion. Note=Translocated into the nucleus via its association with importin-alpha-1 (KPNA2) (PubMed:28991411). As part of the NSL complex, associates with the proximal part of promoters and transcription start sites (PubMed:33657400). As part of the MSL complex, associates with gene bodies (By similarity). Also localizes to mitochondria; associates with mitochondrial DNA and regulates mitochondrial gene expression (PubMed:27768893). {ECO:0000250|UniProtKB:Q9D1P2, ECO:0000269|PubMed:27768893, ECO:0000269|PubMed:28991411, ECO:0000269|PubMed:33657400}

HMOF/MYST1 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

HMOF/MYST1 Antibody (C-term) Blocking Peptide - Images

HMOF/MYST1 Antibody (C-term) Blocking Peptide - Background

The MYST family of histone acetyltransferases, which includes MYST1, is named for the founding members MOZ (MYST3; MIM 601408), yeast YBF2 and SAS2, and TIP60 (HTATIP; MIM 601409). All members of this family contain a MYST region of about 240 amino acids with a canonical acetyl-CoA-binding site and a C2HC-type zinc finger motif. Most MYST proteins also have a chromodomain involved in protein-protein interactions and targeting transcriptional regulators to chromatin (Neal et al., 2000 [PubMed 10786633]).[supplied by OMIM].

HMOF/MYST1 Antibody (C-term) Blocking Peptide - References

Rea,S.,Oncogene 26 (37), 5385-5394 (2007)Pfister,S.,Int. J. Cancer 122 (6), 1207-1213 (2008)Gupta,A.,Mol. Cell. Biol. 28 (1), 397-409 (2008)