

HBO1/MYST2 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP1113a**Specification**

HBO1/MYST2 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [O95251](#)**HBO1/MYST2 Antibody (N-term) Blocking Peptide - Additional Information**

Gene ID 11143

Other Names

Histone acetyltransferase KAT7, Histone acetyltransferase binding to ORC1, Lysine acetyltransferase 7, MOZ, YBF2/SAS3, SAS2 and TIP60 protein 2, MYST-2, KAT7, HBO1, HBOa, MYST2

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP1113a](/product/products/AP1113a) was selected from the N-term region of human HBO1/MYST2. 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.

HBO1/MYST2 Antibody (N-term) Blocking Peptide - Protein Information**Name** KAT7 {ECO:0000303|PubMed:31767635, ECO:0000312|HGNC:HGNC:17016}**Function**

Catalytic subunit of histone acetyltransferase HBO1 complexes, which specifically mediate acetylation of histone H3 at 'Lys-14' (H3K14ac), thereby regulating various processes, such as gene transcription, protein ubiquitination, immune regulation, stem cell pluripotent and self-renewal maintenance and embryonic development (PubMed:[16387653](http://www.uniprot.org/citations/16387653), PubMed:[21753189](http://www.uniprot.org/citations/21753189), PubMed:[24065767](http://www.uniprot.org/citations/24065767), PubMed:[26620551](http://www.uniprot.org/citations/26620551), PubMed:[31767635](http://www.uniprot.org/citations/31767635), PubMed:[31827282](http://www.uniprot.org/citations/31827282)). Some

complexes also catalyze acetylation of histone H4 at 'Lys-5', 'Lys-8' and 'Lys-12' (H4K5ac, H4K8ac and H4K12ac, respectively), regulating DNA replication initiation, regulating DNA replication initiation (PubMed:10438470, PubMed:19187766, PubMed:20129055, PubMed:24065767). Specificity of the HBO1 complexes is determined by the scaffold subunit: complexes containing BRPF scaffold (BRPF1, BRD1/BRPF2 or BRPF3) direct KAT7/HBO1 specificity towards H3K14ac, while complexes containing JADE (JADE1, JADE2 and JADE3) scaffold direct KAT7/HBO1 specificity towards histone H4 (PubMed:19187766, PubMed:20129055, PubMed:24065767, PubMed:26620551). H3K14ac promotes transcriptional elongation by facilitating the processivity of RNA polymerase II (PubMed:31827282). Acts as a key regulator of hematopoiesis by forming a complex with BRD1/BRPF2, directing KAT7/HBO1 specificity towards H3K14ac and promoting erythroid differentiation (PubMed:21753189). H3K14ac is also required for T-cell development (By similarity). KAT7/HBO1-mediated acetylation facilitates two consecutive steps, licensing and activation, in DNA replication initiation: H3K14ac facilitates the activation of replication origins, and histone H4 acetylation (H4K5ac, H4K8ac and H4K12ac) facilitates chromatin loading of MCM complexes, promoting DNA replication licensing (PubMed:10438470, PubMed:11278932, PubMed:18832067, PubMed:19187766, PubMed:20129055, PubMed:21856198, PubMed:24065767, PubMed:26620551). Acts as a positive regulator of centromeric CENPA assembly: recruited to centromeres and mediates histone acetylation, thereby preventing centromere inactivation mediated by SUV39H1, possibly by increasing histone turnover/exchange (PubMed:27270040). Involved in nucleotide excision repair: phosphorylation by ATR in response to ultraviolet irradiation promotes its localization to DNA damage sites, where it mediates histone acetylation to facilitate recruitment of XPC at the damaged DNA sites (PubMed:28719581). Acts as an inhibitor of NF-kappa-B independently of its histone acetyltransferase activity (PubMed:16997280).

Cellular Location

Nucleus. Chromosome. Chromosome, centromere. Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q5SVQ0}. Note=Associates with replication origins specifically during the G1 phase of the cell cycle (PubMed:18832067, PubMed:20129055). Localizes to transcription start sites (PubMed:21753189, PubMed:24065767). Localizes to ultraviolet- induced DNA damage sites following phosphorylation by ATR (PubMed:28719581). Localizes to centromeres in G1 phase (PubMed:27270040).

Tissue Location

Ubiquitously expressed, with highest levels in testis.

HBO1/MYST2 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

HBO1/MYST2 Antibody (N-term) Blocking Peptide - Images

HBO1/MYST2 Antibody (N-term) Blocking Peptide - Background

HBO1/MYST2 is a histone acetyltransferase which specifically represses AR-mediated transcription. It may play a role in DNA replication.

HBO1/MYST2 Antibody (N-term) Blocking Peptide - References

Wu,Z.Q., Proc. Natl. Acad. Sci. U.S.A. 105 (6), 1919-1924 (2008)lizuka,M., Mol. Cell. Biol. 28 (1), 140-153 (2008)