

### **HBO1/MYST2** Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1113b

### **Specification**

### HBO1/MYST2 Antibody (C-term) - Product Information

Application WB,E
Primary Accession O95251

Other Accession <u>Q810T5</u>, <u>Q5SVQ0</u>

Reactivity
Predicted
Host
Clonality
Rabbit
Polyclonal
Isotype
Antigen Region
Human
Mouse, Rat
Rabbit
Rabbit
Polyclonal
Rabbit IgG
S51-583

### HBO1/MYST2 Antibody (C-term) - 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

This HBO1/MYST2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 551-583 amino acids from the C-terminal region of human HBO1/MYST2.

#### **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 prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

# **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**

HBO1/MYST2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

### HBO1/MYST2 Antibody (C-term) - 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, PubMed: 21753189, PubMed:<u>24065767</u>, PubMed:<u>26620551</u>, PubMed:<u>31767635</u>, PubMed:<u>31827282</u>). 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: <u>19187766</u>, PubMed: <u>20129055</u>, PubMed: <u>24065767</u>, PubMed: <u>26620551</u>). 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

### **Cellular Location**

(PubMed: 16997280).

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).

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

## **Tissue Location**

Ubiquitously expressed, with highest levels in testis.

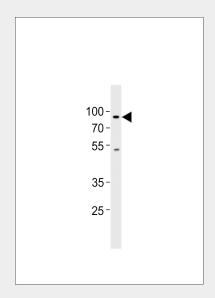
## HBO1/MYST2 Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

# HBO1/MYST2 Antibody (C-term) - Images





HBO1/MYST2 Antibody (C-term) (Cat. #AP1113b) western blot analysis in Hela cell line lysates (35ug/lane). This demonstrates the HBO1/MYST2 antibody detected the HBO1/MYST2 protein (arrow).

# HBO1/MYST2 Antibody (C-term) - Background

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

## **HBO1/MYST2 Antibody (C-term) - 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)