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# HBO1/MYST2 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1113a

## Product Information

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| **Application** | IHC-P, WB, E |
| **Primary Accession** | O95251 |
| **Other Accession** | Q810T5, Q5SVQ0 |
| **Reactivity** | Human, Mouse |
| **Predicted** | Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Calculated MW** | 70642 |
| **Antigen Region** | 99-130 |

## Additional Information

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| **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 99-130 amino acids from the N-terminal region of human HBO1/MYST2. |
| **Dilution** | IHC-P~~1:100~500 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 (N-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **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 |

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| | 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:24065767, PubMed:26620551, PubMed:31767635, PubMed: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. |

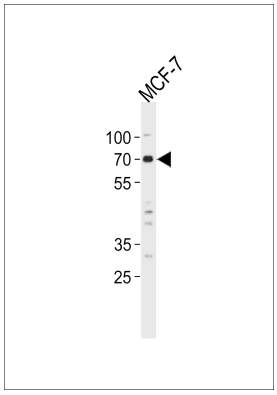
## Background

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

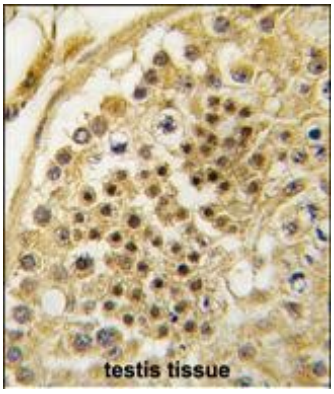
## References

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

## Images




HBO1/MYST2 Antibody (N-term) (Cat. #AP1113a) western blot analysis in MCF-7 cell line lysates (35ug/lane).This demonstrates the HBO1/MYST2 antibody detected the HBO1/MYST2 protein (arrow).




Formalin-fixed and paraffin-embedded human testis tissue reacted with HBO1/MYST2 antibody (N-term) (Cat.#AP1113a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

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