

**Product Name: KAT7 / HBO1 / MYST2 (15C5) Rabbit
Monoclonal Antibody
Catalog #: AMRe12906**



Summary

Production Name	KAT7 / HBO1 / MYST2 (15C5) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Supplied in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% New type preservative N and 0.05% BSA.
Purification	Affinity purification

Immunogen

Gene Name	KAT7 {ECO:0000303 PubMed:31767635, ECO:0000312 HGNC:HGNC:17016}
Alternative Names	HBO1; HBOa; KAT7; MOZ; MYST 2; MYST protein 2; MYST2; SAS 2; SAS2 and TIP60 protein 2; TIP60 protein 2; YBF2/SAS3; ZC2HC7;
Gene ID	11143.0
SwissProt ID	O95251.Recombinant protein of human KAT7/Hbo1/MYST2

Application

Dilution Ratio	WB: 1:2000
Molecular Weight	71kDa

Background

Component of the HBO1 complex which has a histone H4-specific acetyltransferase activity, a reduced activity toward histone H3 and is responsible for the bulk of histone H4 acetylation in vivo. Through chromatin acetylation it may regulate DNA replication and act as a coactivator of TP53-dependent transcription. Specifically represses AR-mediated transcription. 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](http://www.uniprot.org/citations/10438470), PubMed:[19187766](http://www.uniprot.org/citations/19187766), PubMed:[20129055](http://www.uniprot.org/citations/20129055), PubMed:[24065767](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/19187766), PubMed:[20129055](http://www.uniprot.org/citations/20129055), PubMed:[24065767](http://www.uniprot.org/citations/24065767), PubMed:[26620551](http://www.uniprot.org/citations/26620551)). H3K14ac promotes transcriptional elongation by facilitating the processivity of RNA polymerase II (PubMed:[31827282](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/10438470), PubMed:[11278932](http://www.uniprot.org/citations/11278932), PubMed:[18832067](http://www.uniprot.org/citations/18832067)).

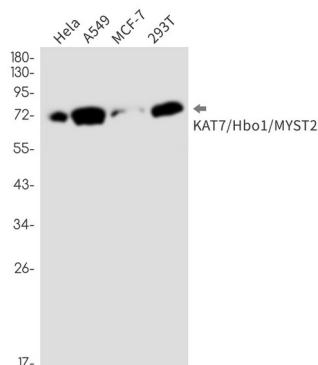
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target="_blank">18832067, PubMed:19187766, PubMed:20129055, PubMed:21856198, PubMed:24065767, PubMed:26620551). Acts as a positive regulator of centromeric CENPA assembly: recruited to centromeres and mediates histone acetylation, thereby preventing 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).

Research Area

Image Data



Western blot detection of KAT7/Hbo1/MYST2 in HeLa,A549,MCF-7,293T cell lysates using KAT7/Hbo1/MYST2 antibody(1:1000 diluted).

Note

For research use only.