

**TIP60 Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1114a****Specification**

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**TIP60 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">O92993</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	60kDa KDa

**Description**

HTATIP (HIV-1 Tat interacting protein TIP60, about 60kDa) belongs to the MYST family of histone acetyl transferases (HATs) and was originally isolated as an HIV-1 TAT-interactive protein. HATs play important roles in regulating chromatin remodeling, transcription and other nuclear processes by acetylating histone and nonhistone proteins. The nucleosome, made up of four core histone proteins (H2A, H2B, H3 and H4), is the primary building block of chromatin. In addition to the growing number of post-translational histone modifications regulating chromatin structure, cells can also exchange canonical histones with variant histones that can directly or indirectly modulate chromatin structure. There are five major variants of histone H2A: canonical H2A (most abundant), H2A.X, MacroH2A, H2ABbd and H2A.Z. Histone H2A.Z, the most conserved variant across species, functions as both a positive and negative regulator of transcription and is important for chromosome stability. Several homologous protein complexes, such as SWR-C, TIP60 and SRCAP (mammals), have been shown to catalyze the ATP-dependent exchange of H2A.Z for H2A in the nucleosome. This protein is a histone acetylase that has a role in DNA repair and apoptosis and is thought to play an important role in signal transduction.

**Immunogen**

Purified recombinant fragment of human TIP60 expressed in E. Coli.

**Formulation**

Ascitic fluid containing 0.03% sodium azide.

**TIP60 Antibody - Additional Information**

**Gene ID** 10524

**Other Names**

Histone acetyltransferase KAT5, 2.3.1.48, 60 kDa Tat-interactive protein, Tip60, Histone acetyltransferase HTATIP, HIV-1 Tat interactive protein, Lysine acetyltransferase 5, cPLA(2)-interacting protein, KAT5, HTATIP, TIP60

**Dilution**

WB~~1/500 - 1/2000

IHC~~1/200 - 1/1000

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

### Precautions

TIP60 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### TIP60 Antibody - Protein Information

**Name** KAT5 {ECO:0000303|PubMed:32817552, ECO:0000312|HGNC:HGNC:5275}

### Function

Catalytic subunit of the NuA4 histone acetyltransferase complex, a multiprotein complex involved in transcriptional activation of select genes principally by acetylation of nucleosomal histones H2A and H4 (PubMed:<a href="http://www.uniprot.org/citations/12776177"

target="\_blank">12776177</a>, PubMed:<a href="http://www.uniprot.org/citations/15042092" target="\_blank">15042092</a>, PubMed:<a href="http://www.uniprot.org/citations/15121871" target="\_blank">15121871</a>, PubMed:<a href="http://www.uniprot.org/citations/15310756" target="\_blank">15310756</a>, PubMed:<a href="http://www.uniprot.org/citations/14966270" target="\_blank">14966270</a>, PubMed:<a href="http://www.uniprot.org/citations/16387653" target="\_blank">16387653</a>, PubMed:<a href="http://www.uniprot.org/citations/19909775" target="\_blank">19909775</a>, PubMed:<a href="http://www.uniprot.org/citations/25865756" target="\_blank">25865756</a>, PubMed:<a href="http://www.uniprot.org/citations/27153538" target="\_blank">27153538</a>, PubMed:<a href="http://www.uniprot.org/citations/29335245" target="\_blank">29335245</a>, PubMed:<a href="http://www.uniprot.org/citations/29174981" target="\_blank">29174981</a>, PubMed:<a href="http://www.uniprot.org/citations/33076429" target="\_blank">33076429</a>, PubMed:<a href="http://www.uniprot.org/citations/32822602" target="\_blank">32822602</a>). Histone acetylation alters nucleosome-DNA interactions and promotes interaction of the modified histones with other proteins which positively regulate transcription (PubMed:<a href="http://www.uniprot.org/citations/12776177" target="\_blank">12776177</a>, PubMed:<a href="http://www.uniprot.org/citations/15042092" target="\_blank">15042092</a>, PubMed:<a href="http://www.uniprot.org/citations/15121871" target="\_blank">15121871</a>, PubMed:<a href="http://www.uniprot.org/citations/15310756" target="\_blank">15310756</a>, PubMed:<a href="http://www.uniprot.org/citations/14966270" target="\_blank">14966270</a>). The NuA4 histone acetyltransferase complex is required for the activation of transcriptional programs associated with proto-oncogene mediated growth induction, tumor suppressor mediated growth arrest and replicative senescence, apoptosis, and DNA repair (PubMed:<a href="http://www.uniprot.org/citations/17709392" target="\_blank">17709392</a>, PubMed:<a href="http://www.uniprot.org/citations/19783983" target="\_blank">19783983</a>, PubMed:<a href="http://www.uniprot.org/citations/32832608" target="\_blank">32832608</a>). The NuA4 complex plays a direct role in repair of DNA double-strand breaks (DSBs) by promoting homologous recombination (HR): the complex inhibits TP53BP1 binding to chromatin via MBTD1, which recognizes and binds histone H4 trimethylated at 'Lys-20' (H4K20me), and KAT5 that catalyzes acetylation of 'Lys-15' of histone H2A (H2AK15ac), thereby blocking the ubiquitination mark required for TP53BP1 localization at DNA breaks (PubMed:<a href="http://www.uniprot.org/citations/27153538" target="\_blank">27153538</a>, PubMed:<a href="http://www.uniprot.org/citations/32832608" target="\_blank">32832608</a>). Also involved in DSB repair by mediating acetylation of 'Lys-5' of histone H2AX (H2AXK5ac), promoting NBN/NBS1 assembly at the sites of DNA damage (PubMed:<a href="http://www.uniprot.org/citations/17709392" target="\_blank">17709392</a>, PubMed:<a href="http://www.uniprot.org/citations/26438602" target="\_blank">26438602</a>). The NuA4 complex plays a key role in hematopoietic stem cell maintenance and is required to maintain acetylated H2A.Z/H2AZ1 at MYC target genes (By similarity). The NuA4 complex is also required for spermatid development by promoting acetylation of histones: histone hyperacetylation is required for histone replacement during the transition from round to elongating spermatids (By similarity). Component of a SWR1-like complex that specifically mediates the removal of histone

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[34608293](http://www.uniprot.org/citations/34608293)). Catalyzes acetylation of AURKB at kinetochores, increasing AURKB activity and promoting accurate chromosome segregation in mitosis (PubMed:[26829474](http://www.uniprot.org/citations/26829474)). Acetylates RAN during mitosis, promoting microtubule assembly at mitotic chromosomes (PubMed:[29040603](http://www.uniprot.org/citations/29040603)). Acetylates NDC80/HEC1 during mitosis, promoting robust kinetochore- microtubule attachment (PubMed:[30409912](http://www.uniprot.org/citations/30409912)). Catalyzes crotonylation of MAPRE1/EB1, thereby ensuring accurate spindle positioning in mitosis (PubMed:[34608293](http://www.uniprot.org/citations/34608293)).

### Cellular Location

Nucleus. Chromosome. Cytoplasm Chromosome, centromere, kinetochore Cytoplasm, cytoskeleton, spindle pole Nucleus, nucleolus. Cytoplasm, perinuclear region. Note=Upon stimulation with EDN1, it is exported from the nucleus to the perinuclear region and UV irradiation induces translocation into punctuate subnuclear structures named nuclear bodies (PubMed:11262386). Transiently localizes to kinetochores in early mitosis (PubMed:26829474). Localizes to spindle poles when chromosomes align during metaphase (PubMed:34608293). Localizes in the cytoplasm and nucleus of round spermatids (By similarity).  
 {ECO:0000250|UniProtKB:Q8CHK4, ECO:0000269|PubMed:11262386, ECO:0000269|PubMed:26829474, ECO:0000269|PubMed:34608293}

### TIP60 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### TIP60 Antibody - Images

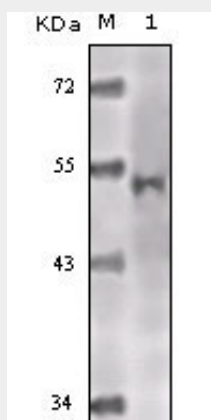


Figure 1: Western blot analysis using Tip60 mouse mAb against truncated Tip60 recombinant protein.

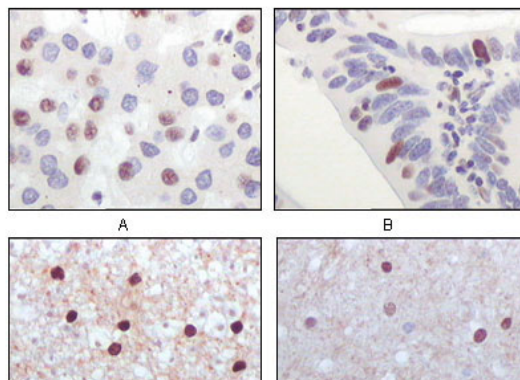


Figure 2: Immunohistochemical analysis of paraffin-embedded human liver carcinoma (A), rectum carcinoma (B), normal medulla tissue (C) and normal interbrain tissues (D), showing nuclear localization using Tip60 mouse mAb with DAB staining.

#### **TIP60 Antibody - References**

1. Mizuguchi, G. et al. Science 2004 303, 343-348. 2. Jin, J. et al. Trends Biochem. Sci. 2005 30, 680-687. 3. Raisner, R.M. and Madhani, H.D. Curr. Opin. Genet. 2006 Dev. 16, 119-124.