

**KAT1 (HAT1) Antibody (N-term) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP1079a****Specification**

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**KAT1 (HAT1) Antibody (N-term) Blocking peptide - Product Information**Primary Accession [O14929](#)**KAT1 (HAT1) Antibody (N-term) Blocking peptide - Additional Information****Gene ID** 8520**Other Names**

Histone acetyltransferase type B catalytic subunit, Histone acetyltransferase 1, HAT1, KAT1

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP1079a](/product/products/AP1079a) was selected from the N-term region of human HAT1. 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.

**KAT1 (HAT1) Antibody (N-term) Blocking peptide - Protein Information****Name** HAT1**Synonyms** KAT1**Function**

Histone acetyltransferase that plays a role in different biological processes including cell cycle progression, glucose metabolism, histone production or DNA damage repair (PubMed: [31278053](http://www.uniprot.org/citations/31278053), PubMed: [20953179](http://www.uniprot.org/citations/20953179), PubMed: [23653357](http://www.uniprot.org/citations/23653357), PubMed: [32081014](http://www.uniprot.org/citations/32081014)). Coordinates histone production and acetylation via H4 promoter binding (PubMed: [31278053](http://www.uniprot.org/citations/31278053)). Acetylates histone H4 at 'Lys-5' (H4K5ac) and 'Lys-12' (H4K12ac) and, to a lesser extent, histone H2A at 'Lys-5' (H2AK5ac) (PubMed: [22615379](http://www.uniprot.org/citations/22615379))

target="\_blank">22615379</a>, PubMed:<a href="http://www.uniprot.org/citations/11585814" target="\_blank">11585814</a>). Drives H4 production by chromatin binding to support chromatin replication and acetylation. Since transcription of H4 genes is tightly coupled to S-phase, plays an important role in S-phase entry and progression (PubMed:<a href="http://www.uniprot.org/citations/31278053" target="\_blank">31278053</a>). Promotes homologous recombination in DNA repair by facilitating histone turnover and incorporation of acetylated H3.3 at sites of double-strand breaks (PubMed:<a href="http://www.uniprot.org/citations/23653357" target="\_blank">23653357</a>). In addition, acetylates other substrates such as chromatin-related proteins (PubMed:<a href="http://www.uniprot.org/citations/32081014" target="\_blank">32081014</a>). Acetylates also RSAD2 which mediates the interaction of ubiquitin ligase UBE4A with RSAD2 leading to RSAD2 ubiquitination and subsequent degradation (PubMed:<a href="http://www.uniprot.org/citations/31812350" target="\_blank">31812350</a>).

#### Cellular Location

[Isoform A]: Nucleus matrix Mitochondrion

### KAT1 (HAT1) Antibody (N-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

### KAT1 (HAT1) Antibody (N-term) Blocking peptide - Images

### KAT1 (HAT1) Antibody (N-term) Blocking peptide - Background

Histone acetylation, particularly of histone H4, has been proposed to play an important role in replication-dependent nucleosome assembly. The HAT1 protein contains D, A, and B motifs, which are present in many N-acetyltransferases, including those that acetylate substrates other than histones. The HAT1 holoenzyme consists of 2 subunits: the catalytic 46-kD HAT1 and the accessory p46. The p46 subunit stimulated the activity of HAT1 and bound to core histones. The HAT1 holoenzyme acetylated newly synthesized but not nucleosomal histone H4 at lys5 and lys12, and, to a lesser extent, histone H2A at lys5. HAT1 and p46 polypeptides are located in the nucleus of S-phase cells. HAT1 may play a role in telomeric silencing.

### KAT1 (HAT1) Antibody (N-term) Blocking peptide - References

Gronroos, E., et al., Mol. Cell 10(3):483-493 (2002). Makowski, A.M., et al., J. Biol. Chem. 276(47):43499-43502 (2001). Cheung, P., et al., Mol. Cell 5(6):905-915 (2000). Verreault, A., et al., Curr. Biol. 8(2):96-108 (1998).