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KAT1 (HAT1) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5600

Specification

KAT1 (HAT1) Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	O14929
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**H=50,40;M=49;R=49 KDa**
Isotype	**Rabbit IgG**
Antigen Source	**HUMAN**

KAT1 (HAT1) Antibody (C-term) - Additional Information

Gene ID 8520

Antigen Region
389-419

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

Dilution
WB~~1:2000

Target/Specificity
This KAT1 (HAT1) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 389-419 amino acids from the C-terminal region of human KAT1 (HAT1).

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
KAT1 (HAT1) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

KAT1 (HAT1) Antibody (C-term) - 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:20953179, PubMed:23653357, PubMed:31278053, PubMed:32081014). Coordinates histone production and acetylation via H4 promoter binding (PubMed:31278053). Acetylates histone H4 at 'Lys-5' (H4K5ac) and 'Lys-12' (H4K12ac) and, to a lesser extent, histone H2A at 'Lys-5' (H2AK5ac) (PubMed:11585814, PubMed:22615379). 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:31278053). Promotes homologous recombination in DNA repair by facilitating histone turnover and incorporation of acetylated H3.3 at sites of double-strand breaks (PubMed:23653357). In addition, acetylates other substrates such as chromatin-related proteins (PubMed:32081014). Also acetylates RSAD2 which mediates the interaction of ubiquitin ligase UBE4A with RSAD2 leading to RSAD2 ubiquitination and subsequent degradation (PubMed:31812350).

Cellular Location
[Isoform A]: Nucleus matrix Mitochondrion

KAT1 (HAT1) Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KAT1 (HAT1) Antibody (C-term) - Images

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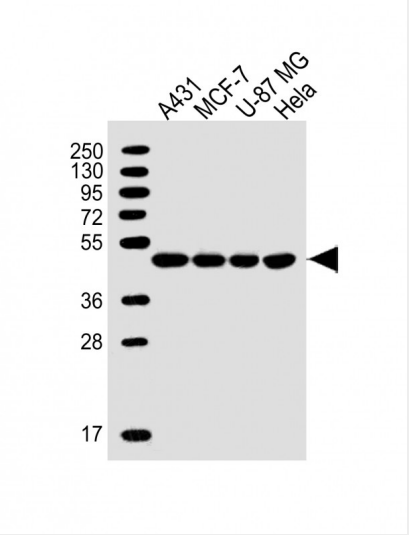

All lanes : Anti-HAT1 Antibody (E404) at 1:2000 dilution Lane 1: A431 whole cell lysate Lane 2: MCF-7 whole cell lysate Lane 3: U-87 MG whole cell lysate Lane 4: Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 50 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

KAT1 (HAT1) Antibody (C-term) - 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 (C-term) - 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).