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# Recombinant Anti-HAT1 Rabbit mAb

Catalog # AP95209

## Product Information

| | |
|---|---|
| **Application** | WB, IHC, FC, IP, IF/IC |
| **Primary Accession** | O14929 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Monoclonal |
| **Calculated MW** | 49541 |

## Additional Information

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|---|---|
| **Gene ID** | 8520 |
| **Other Names** | KAT1; Histone acetyltransferase type B catalytic subunit; Histone acetyltransferase 1 |
| **Target/Specificity** | KLH-conjugated synthetic peptide encompassing a sequence within human HAT1 protein. The exact sequence is proprietary. |
| **Dilution** | WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IP~~N/A IF/IC~~N/A |
| **Format** | Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300. |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

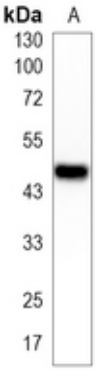
## Protein Information

| | |
|---|---|
| **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 |

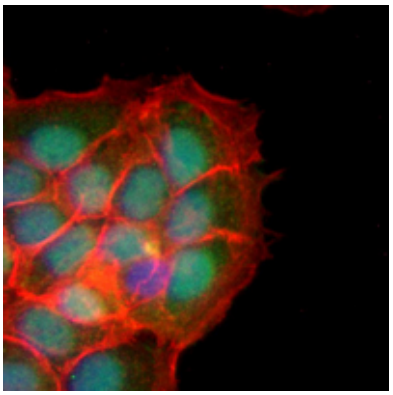
mediates the interaction of ubiquitin ligase UBE4A with RSAD2 leading to RSAD2 ubiquitination and subsequent degradation (PubMed:31812350). In addition to protein acetyltransferase, can use different acyl-CoA substrates, such as 2-methylpropenoyl-CoA (methacryl-CoA), and is able to mediate histone methacrylation (PubMed:34961760).

**Cellular Location** [Isoform A]: Nucleus matrix Mitochondrion

## Images




Western blot analysis of HAT1 expression in MCF7 (A) whole cell lysates. (Predicted band size: 50 kD; Observed band size: 45 kD)



Immunofluorescent analysis of HAT1 staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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