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KAT1 Rabbit mAb

Catalog # AP75646

Product Information

Application	WB, IHC-P, IHC-F, FC, IP
Primary Accession	O14929
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	49541

Additional Information

Gene ID	8520
Other Names	HAT1
Dilution	WB~~1:500-1:1000 IHC-P~~N/A IHC-F~~N/A FC~~1:50-1:100 IP~~1:20-1:50
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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

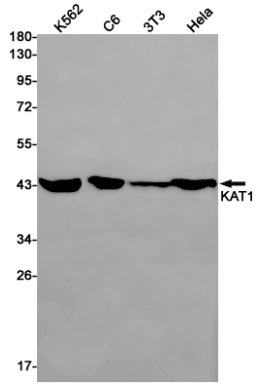
chromatin-related proteins (PubMed:32081014). Also acetylates RSAD2 which mediates the interaction of ubiquitin ligase UBE4A with RSAD2 leading to RSAD2 ubiquitination and subsequent degradation (PubMed:31812350). In addition to protein acetyltransferase, can use different acyl-CoA substrates, such as 2-methylpropenoyl-CoA (methacryl-CoA), and is able to mediate histone methacrylation (PubMed:34961760).

Cellular Location [Isoform A]: Nucleus matrix Mitochondrion

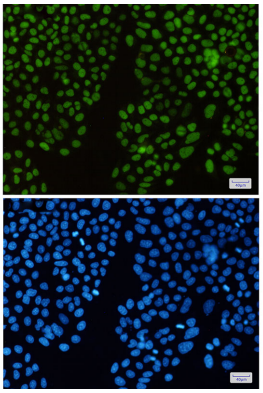
Background

Acetylates soluble but not nucleosomal histone H4 at 'Lys-5' (H4K5ac) and 'Lys-12' (H4K12ac) and, to a lesser extent, acetylates histone H2A at 'Lys-5' (H2AK5ac). Has intrinsic substrate specificity that modifies lysine in recognition sequence GXGKXG.

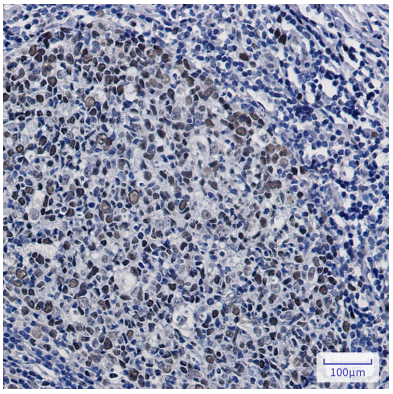
Images



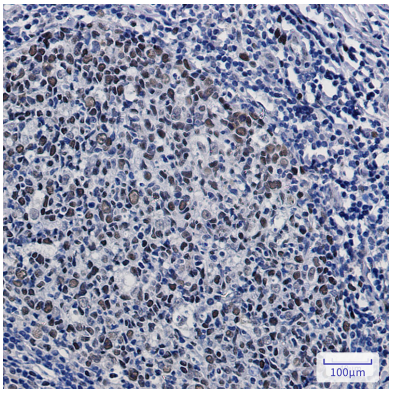
Western blot analysis of KAT1 in K562, C6, 3T3, Hela lysates using KAT1 antibody.

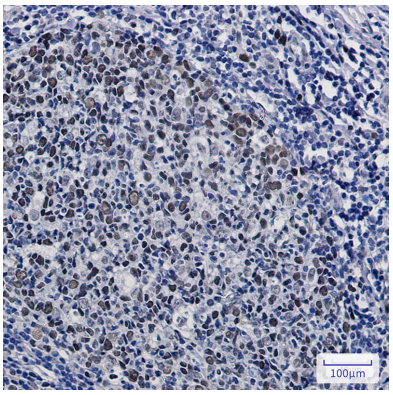


Immunocytochemistry analysis of KAT1(green) in Hela using KAT1 antibody,and DAPI(blue)



Immunohistochemistry analysis of paraffin-embedded Human tonsil using KAT1/HAT1 antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.





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