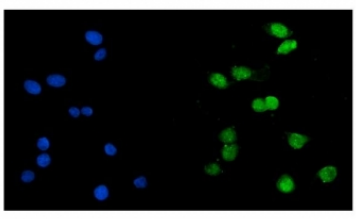
Histone acetyltransferase 1 Antibody / HAT1 / KAT1 (RQ6485)

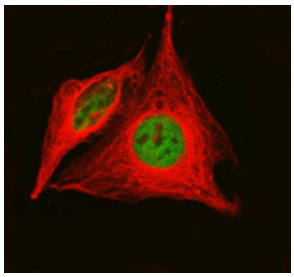
Catalog No.	Formulation	Size
RQ6485	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

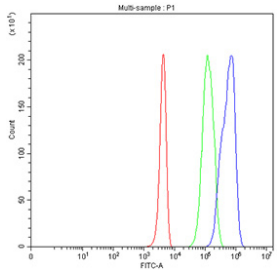
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	O14929
Localization	Cytoplasmic, nuclear
Applications	Western Blot : 1-2ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells Immunohistochemistry (FFPE) : 2-5ug/ml Immunoprecipitation : 2ug per 500ug of lysate
Limitations	This Histone acetyltransferase 1 antibody is available for research use only.



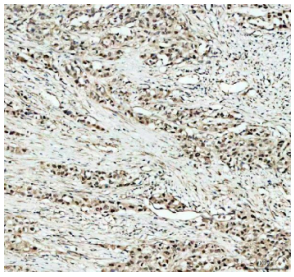
Immunofluorescent staining of FFPE human Caco-2 cells with Histone acetyltransferase 1 antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



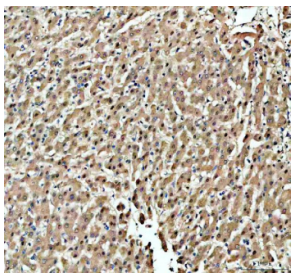
Immunofluorescent staining of FFPE human HeLa cells with Histone acetyltransferase 1 antibody (green) and Alpha Tubulin mAb (red). HIER: steam section in pH6 citrate buffer for 20 min.



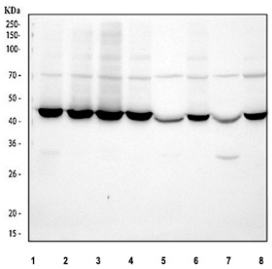
Flow cytometry testing of fixed and permeabilized human 293T cells with Histone acetyltransferase 1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Histone acetyltransferase 1 antibody.



IHC staining of FFPE human lung cancer tissue with Histone acetyltransferase 1 antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



IHC staining of FFPE human liver cancer tissue with Histone acetyltransferase 1 antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot testing of 1) human HeLa, 2) human 293T, 3) human K562, 4) human RT4, 5) rat liver, 6) rat C6, 7) mouse liver and 8) mouse NIH 3T3 cell lysate with Histone acetyltransferase 1 antibody. Predicted molecular weight: 50 kDa (isoform a).

Description

Histone acetyltransferase 1 antibody targets Histone acetyltransferase 1, also known as HAT1 or KAT1, encoded by the HAT1 gene. Histone acetyltransferase 1 is a conserved acetyltransferase that plays a key role in chromatin assembly and epigenetic regulation by catalyzing the acetylation of newly synthesized histones. HAT1 is primarily localized in the cytoplasm and nucleus, where it participates in histone processing prior to and during incorporation into chromatin. Through its enzymatic activity, HAT1 contributes to the establishment of appropriate chromatin structure during DNA replication and repair.

Functionally, Histone acetyltransferase 1 acetylates specific lysine residues on histone H4, a modification that facilitates

histone deposition and nucleosome assembly. This activity is especially important during S phase, when newly synthesized histones must be rapidly processed and incorporated into replicating chromatin. By regulating histone acetylation status, HAT1 influences chromatin accessibility and ensures proper coordination between DNA replication and chromatin maturation. A Histone acetyltransferase 1 antibody supports studies focused on chromatin dynamics and epigenetic regulation.

HAT1 is broadly expressed across tissues and cell types, reflecting its fundamental role in chromatin maintenance and genome stability. Its expression is closely linked to proliferative capacity, with higher levels often observed in actively dividing cells. HAT1 interacts with histone chaperones and other chromatin-associated proteins, forming complexes that guide histone handling and deposition. This coordinated activity underscores the importance of HAT1 in maintaining epigenetic integrity during cell cycle progression.

From a disease-relevance perspective, altered HAT1 expression or activity has been investigated in cancer biology and genome instability studies. Dysregulation of histone acetylation can disrupt normal chromatin organization and gene expression programs, contributing to uncontrolled cell proliferation and tumor development. HAT1 has also been studied in the context of DNA damage response pathways, where proper chromatin reassembly is essential for efficient repair and preservation of genomic integrity. These associations highlight HAT1 as a molecule of interest in studies of epigenetic dysregulation and disease-associated chromatin remodeling.

At the molecular level, Histone acetyltransferase 1 functions as part of multiprotein complexes involved in histone modification and chromatin assembly. Post-translational modifications, interaction with partner proteins, and cellular context can influence its activity and electrophoretic behavior on SDS-PAGE without implying changes in primary sequence. A Histone acetyltransferase 1 antibody supports research applications focused on epigenetic enzyme expression, chromatin biology, and disease-associated changes in histone modification, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the Histone acetyltransferase 1 antibody should be determined by the researcher.

Immunogen

Amino acids EKFLVEYKSAVEKKLAEYK from the human protein were used as the immunogen for the Histone acetyltransferase 1 antibody.

Storage

After reconstitution, the Histone acetyltransferase 1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.