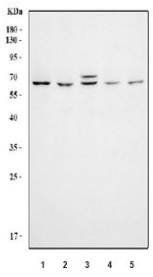
KAT5 Antibody / Tip60 / 60 kDa Tat-interactive protein (RQ7084)

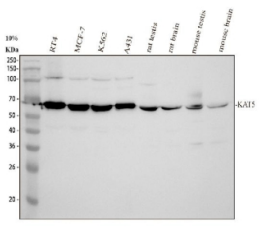
Catalog No.	Formulation	Size
RQ7084	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q92993
Applications	Western blot: 0.5-1ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This KAT5 antibody is available for research use only.



Western blot testing of huma 1) Jurkat, 2) CCRF-CEM, 3) 293T, 4) HeLa and 5) MCF7 cell lysate with KAT5 antibody. Predicted molecular weight ~59 kDa.



Western blot analysis of KAT5 Antibody / Tip60 Antibody in human, rat, and mouse samples. Whole cell lysates and tissue lysates were resolved by SDS-PAGE and transferred to a nitrocellulose membrane, followed by incubation with KAT5 Antibody / Tip60 Antibody and HRP-conjugated secondary antibody. Lane 1: human RT4 whole cell lysates; Lane 2: human MCF-7 whole cell lysates; Lane 3: human K562 whole cell lysates; Lane 4: human A431 whole cell lysates; Lane 5: rat testis tissue lysates; Lane 6: rat brain tissue lysates; Lane 7: mouse testis tissue lysates; Lane 8: mouse brain tissue lysates. A specific band is observed at approximately 59 kDa across samples, consistent with the predicted molecular weight of KAT5 at approximately 59 kDa.

Description

KAT5 Antibody targets lysine acetyltransferase 5, a nuclear histone acetyltransferase commonly known as Tip60 and encoded by the KAT5 gene. Tip60 is a member of the MYST family of histone acetyltransferases and functions as a central regulator of chromatin structure, transcriptional regulation, and DNA damage response pathways. Through its enzymatic activity and participation in multiprotein complexes, KAT5 plays a critical role in maintaining genomic stability and coordinating nuclear signaling events in response to cellular stress.

Functionally, Tip60 catalyzes the acetylation of histone substrates, including histone H4 and histone H2A variants, leading to increased chromatin accessibility and facilitation of transcriptional activation. In addition to histones, KAT5 acetylates a range of non-histone proteins involved in DNA repair, cell cycle control, and apoptosis regulation. These acetylation events influence protein stability, protein-protein interactions, and signaling outcomes, positioning Tip60 as an integrative regulator of transcriptional and stress response networks. A KAT5 Antibody supports studies focused on epigenetic regulation, histone acetylation dynamics, and nuclear signaling mechanisms across diverse biological contexts.

KAT5 is predominantly localized to the nucleus, consistent with its role in chromatin-associated processes. Within the nucleus, Tip60 functions as part of large multiprotein assemblies that link histone acetylation with ATP-dependent chromatin remodeling, transcription factor recruitment, and DNA repair machinery. Subcellular distribution and activity of KAT5 can vary depending on cell type, developmental stage, and cellular stress conditions, reflecting dynamic regulation of its interaction partners and enzymatic function. These features highlight Tip60 as a responsive chromatin regulator rather than a static epigenetic modifier.

At the molecular level, KAT5 contains a conserved MYST acetyltransferase domain that mediates catalytic activity, along with additional regions that facilitate protein-protein interactions within chromatin-modifying complexes. Structural features of Tip60 enable coordinated regulation of acetylation events and integration with broader chromatin remodeling processes. Post-translational modifications of KAT5 itself, as well as regulated complex assembly, further fine-tune its activity and functional specificity in different cellular contexts.

From a disease relevance perspective, altered Tip60 expression or activity has been investigated in cancer, neurodegenerative disorders, and other conditions associated with genomic instability and dysregulated transcription. KAT5 has been implicated in tumor suppressor pathways through its involvement in DNA damage signaling, apoptosis regulation, and maintenance of chromatin integrity. Disruption of Tip60-mediated acetylation can affect cellular responses to genotoxic stress and influence cell fate decisions, underscoring the importance of KAT5 in preserving nuclear homeostasis. KAT5 Antibody reagents support research applications examining epigenetic control mechanisms, chromatin remodeling pathways, and DNA damage response signaling, with NSJ Bioreagents providing antibodies intended for research use.

Application Notes

Optimal dilution of the KAT5 antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids M1-E56) was used as the immunogen for the KAT5 antibody.

Storage

After reconstitution, the KAT5 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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