Histone H3 (acetyl K9) Antibody / HIST1H3A [clone 32H23] (FY13175)

Catalog No.	Formulation	Size
FY13175	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32H23
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P68431
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry : 1:50-1:200 Immunocytochemistry/Immunofluorescence : 1:50-1:200 Immunoprecipitation : 1:50 Flow Cytometry : 1:50
Limitations	This Histone H3 (acetyl K9) antibody is available for research use only.

Description

Histone H3 (acetyl K9) antibody detects Histone H3 acetylated at lysine 9, encoded by the HIST1H3A gene. Histone H3 is a core component of the nucleosome, which packages DNA into chromatin and regulates access to genetic information. Post-translational modifications such as acetylation, methylation, and phosphorylation determine chromatin structure and gene expression. Acetylation at lysine 9 is associated with active chromatin and transcriptional activation. Histone H3 (acetyl K9) antibody provides researchers with a powerful tool for studying epigenetic regulation and gene expression control.

Histone H3 acetylated at lysine 9 plays an essential role in loosening chromatin structure, allowing transcription factors and polymerases to access DNA. Research using Histone H3 (acetyl K9) antibody has demonstrated that acetylation is

mediated by histone acetyltransferases and removed by histone deacetylases. This modification serves as a signal for recruitment of chromatin remodeling complexes and transcriptional coactivators. The dynamic balance of acetylation and deacetylation at lysine 9 influences gene expression programs in development, differentiation, and disease.

Dysregulation of Histone H3 acetylation at lysine 9 has been implicated in cancer, neurological disorders, and inflammatory disease. Studies with Histone H3 (acetyl K9) antibody have shown that aberrant acetylation patterns are linked to oncogene activation or tumor suppressor silencing. In neurobiology, reduced acetylation contributes to cognitive decline, while histone deacetylase inhibitors restore acetylation and improve memory in experimental models. These findings underscore the therapeutic potential of targeting histone acetylation in disease.

Histone modifications such as H3 acetyl K9 are also important in stem cell biology and reprogramming. Research using Histone H3 (acetyl K9) antibody has confirmed that acetylation levels influence pluripotency and lineage commitment. Elevated acetylation is associated with transcriptionally open chromatin, supporting reprogramming of somatic cells to induced pluripotent stem cells. These applications highlight the broad importance of this modification across biological systems.

Histone H3 (acetyl K9) antibody is widely used in chromatin immunoprecipitation, western blotting, and immunofluorescence. Chromatin immunoprecipitation allows mapping of acetylation across genomes, western blotting detects modification-specific forms of histone H3, and immunofluorescence reveals distribution of acetylated chromatin in cells. These methods make Histone H3 (acetyl K9) antibody indispensable in epigenetics research.

By supplying validated Histone H3 (acetyl K9) antibody reagents, NSJ Bioreagents supports studies into chromatin remodeling, epigenetic therapy, and gene expression regulation. Detection of Histone H3 acetylation at lysine 9 provides insight into the fundamental mechanisms controlling transcription and disease.

Application Notes

Optimal dilution of the Histone H3 (acetyl K9) antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Histone H3 (acetyl K9) was used as the immunogen for the Histone H3 (acetyl K9) antibody.

Storage

Store the Histone H3 (acetyl K9) antibody at -20oC.