Histone H3 (di-methyl K79) Antibody / HIST1H3A [clone 31H84] (FY12514)

Catalog No.	Formulation	Size
FY12514	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	31H84
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
Limitations	This Histone H3 (di-methyl K79) antibody is available for research use only.

Description

Histone H3 (di-methyl K79) antibody detects histone H3 dimethylated at lysine 79, a post translational modification on the core histone H3 protein encoded by the HIST1H3A gene. Histone modifications regulate chromatin structure and gene expression by altering nucleosome dynamics and recruiting effector proteins. Dimethylation at lysine 79, located within the globular domain of histone H3, is catalyzed by the DOT1L methyltransferase and is associated with active transcription.

Histone H3 (di-methyl K79) antibody is widely used in epigenetics, cancer research, and developmental biology. Detection of H3K79me2 serves as a marker of euchromatin and transcriptionally active regions. By applying this antibody, researchers can study how histone methylation influences chromatin remodeling and gene regulation.

The antibody is validated for chromatin immunoprecipitation, western blotting, and immunofluorescence. In ChIP assays,

Histone H3 (di-methyl K79) antibody enriches for genomic regions with active transcription. Western blot detects histone H3 with specific dimethylation at K79, while immunofluorescence maps nuclear distribution of this epigenetic modification. These applications allow detailed study of gene expression and epigenetic control.

Aberrant H3K79 methylation is implicated in leukemogenesis and other cancers. Fusion proteins such as MLL AF9 recruit DOT1L, leading to abnormal dimethylation and deregulated gene expression. By detecting H3K79me2 with specific antibodies, scientists can investigate mechanisms of oncogenic transformation and therapeutic responses to DOT1L inhibitors.

Beyond cancer, H3K79 methylation regulates developmental programs, DNA damage repair, and cell cycle transitions. Its role in lineage specification makes it a critical marker in stem cell biology. Histone H3 (di-methyl K79) antibody therefore provides a versatile tool for exploring transcriptional regulation in both normal and pathological contexts.

Histone H3 (di-methyl K79) antibody from NSJ Bioreagents provides strong specificity for dimethylated histone H3, supporting reliable analysis of epigenetic modifications in chromatin biology and disease.

Application Notes

Optimal dilution of the Histone H3 (di-methyl K79) antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Histone H3 (di methyl K79) was used as the immunogen for the Histone H3 (di-methyl K79) antibody.

Storage

Store the Histone H3 (di-methyl K79) antibody at -20oC.