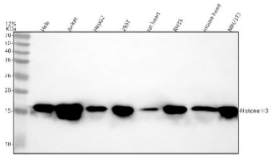
Histone H3 (mono methyl K36) Antibody / HIST1H3A [clone DEG-8] (FY12310)

Catalog No.	Formulation	Size
FY12310	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	DEG-8
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 : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml
Limitations	This Histone H3 (mono methyl K36) antibody is available for research use only.



Western blot analysis of Histone H3 using Histone H3 (mono methyl K36) antibody. Lane 1: human Hela whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human HepG2 whole cell lysates, Lane 4: human 293T whole cell lysates, Lane 5: rat heart tissue lysates, Lane 6: rat RH35 whole cell lysates, Lane 7: mouse heart tissue lysates, Lane 8: mouse NIH/3T3 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Histone H3 antibody at 1:1000 overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A specific band was detected for Histone H3 at approximately 15-17 kDa. The expected molecular weight of Histone H3 is at 15 kDa.

Description

Histone H3 (mono methyl K36) antibody detects a specific histone modification in histone H3, encoded by the HIST1H3A gene on chromosome 6p22.2. Histone H3 (mono methyl K36) antibody is widely used in epigenetics, chromatin biology, and transcriptional regulation research. Histone H3 is a core histone protein that forms the nucleosome with H2A, H2B, and H4, packaging DNA into chromatin. Post-translational modifications of histone H3, such as methylation, acetylation, and phosphorylation, regulate gene expression and chromatin structure. Mono methylation at lysine 36 (H3K36me1) is a specific epigenetic mark linked to transcriptional regulation and chromatin remodeling.

Structurally, Histone H3 is a ~15 kDa protein with a histone fold domain that supports nucleosome assembly and an N-terminal tail that undergoes diverse modifications. Lysine 36 lies within the core domain, and its methylation is catalyzed by SETD2 and other histone methyltransferases. H3K36me1 provides a platform for recruitment of chromatin-associated proteins that regulate transcription elongation and DNA repair.

Functionally, mono methylation of H3K36 is associated with transcription initiation, splicing regulation, and suppression of cryptic transcription. It also coordinates DNA damage repair by recruiting chromatin modifiers and repair enzymes. Researchers use Histone H3 (mono methyl K36) antibody to investigate transcriptional regulation, chromatin dynamics, and epigenetic mechanisms in normal and disease states.

Clinically, altered H3K36 methylation is linked to cancer, developmental disorders, and neurodegeneration. Mutations in SETD2 and other H3K36 methyltransferases disrupt normal patterns of methylation, contributing to tumorigenesis. Histone modifications including H3K36me1 are being investigated as therapeutic targets for epigenetic therapies. NSJ Bioreagents provides Histone H3 (mono methyl K36) antibody for epigenetics, cancer, and transcription research.

Experimentally, Histone H3 (mono methyl K36) antibody is used in western blotting to detect the ~15 kDa protein, in chromatin immunoprecipitation (ChIP) to study genome-wide localization of H3K36me1, and in immunofluorescence microscopy to assess chromatin organization. It is a key tool in studies of transcriptional regulation and epigenetics.

Application Notes

Optimal dilution of the Histone H3 (mono methyl K36) antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Histone H3 (mono methyl K36) was used as the immunogen for the Histone H3 (mono methyl K36) antibody.

Storage

Store the Histone H3 (mono methyl K36) antibody at -20oC.