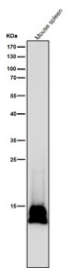
Histone H2B Formyl K116 Antibody / HIST2H2BE [clone 31H94] (FY12262)

Catalog No.	Formulation	Size
FY12262	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

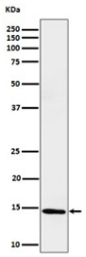
Recombinant RABBIT MONOCLONAL

Bulk quote request

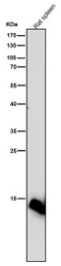
Availability	2-3 weeks
Species Reactivity	Human, Mouse
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	31H94
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q16778
Applications	Western Blot : 1:500-1:2000 Immunocytochemistry/Immunofluorescence : 1:50-1:200
Limitations	This Histone H2B Formyl K116 Antibody is available for research use only.



Histone H2B Formyl K116 Antibody for WB. All lanes use the Histone H2B (formyl K116) antibody at 1:5K dilution for 1 hour at room temperature.



Western blot analysis of Histone H2B (formyl K116) expression in HeLa cell lysate using Histone H2B Formyl K116 Antibody.



All lanes use the Histone H2B (formyl K116) antibody at 1:5K dilution for 1 hour at room temperature.

Description

Histone H2B Formyl K116 Antibody detects histone H2B modified by formylation at lysine 116, a novel post-translational modification implicated in chromatin regulation. Histone H2B is a core histone protein encoded by several genes, including HIST2H2BE, and together with H2A, H3, and H4 forms the nucleosomal octamer around which DNA is wrapped. Post-translational modifications of histones, such as methylation, acetylation, phosphorylation, ubiquitination, and formylation, fine-tune chromatin accessibility and transcriptional activity. This antibody is part of a broader collection of Histone H2B antibodies used to study chromatin structure, histone modifications, and epigenetic regulation.

Research using Histone H2B (formyl K116) antibody has highlighted this modification's emerging role in gene expression. Lysine formylation arises from oxidative stress and formaldehyde metabolism, creating structural and regulatory effects on chromatin. Formylation at H2B lysine 116 has been shown to influence nucleosome stability and may interfere with acetylation or ubiquitination at the same site, thereby altering transcriptional outcomes. This suggests a potential role for H2B formylation in stress response pathways, epigenetic reprogramming, and genome integrity maintenance.

In disease contexts, aberrant histone formylation has been observed in cancer, where increased oxidative stress and altered aldehyde metabolism can modify chromatin landscapes. Formylated histones may serve as biomarkers of oxidative DNA damage and contribute to oncogenic gene expression. In neurodegenerative disorders, elevated histone formylation has been linked to disrupted transcription and neuronal stress, implicating it in conditions such as Alzheimer's disease. Studies are also exploring its relevance in metabolic disorders where aldehyde detoxification is impaired.

Antibodies specific to histone H2B (formyl K116) are validated for chromatin immunoprecipitation (ChIP), immunofluorescence, and western blot. These reagents provide a tool to study chromatin modifications in relation to stress response, epigenetics, and transcriptional control. By distinguishing this specific modification, researchers can map its genomic distribution and functional consequences.

NSJ Bioreagents supplies this Histone H2B (formyl K116) antibody for research into chromatin biology, oxidative stress, and epigenetic regulation.

Application Notes

Optimal dilution of the Histone H2B Formyl K116 Antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Histone H2B (formyl K116) was used as the immunogen for the Histone H2B

Formyl K116 Antibody.

Storage

Store the Histone H2B Formyl K116 Antibody at -20oC.