

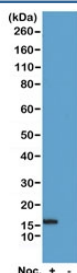
Recombinant phospho-Histone H2B Antibody / pSer14 [clone RM238] (R20243)

Catalog No.	Formulation	Size
R20243-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20243-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25

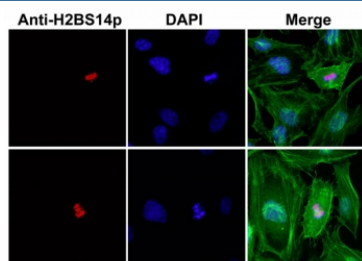
Recombinant **RABBIT MONOCLONAL**

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Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM238
Purity	Protein A purified from animal origin-free supernatant
UniProt	P33778
Gene ID	3018
Applications	Western Blot : 0.5-2ug/ml Immunocytochemistry : 1-2ug/ml ELISA : 0.2-1ug/ml
Limitations	This recombinant phospho-Histone H2B antibody is available for research use only.



Western blot test of acid extracts of HeLa cells treated or non-treated with Nocodazole, using recombinant phospho-Histone H2B antibody at 0.5 ug/ml, showed a band of Histone H2B phosphorylated at Serine 14 in HeLa cells.



ICC/IF of HeLa cells using recombinant phospho-Histone H2B antibody (red) and DAPI (blue). Actin filaments have been labeled with fluorescein phalloidin (green).

Description

The Recombinant phospho-Histone H2B antibody is a recombinant reagent engineered to specifically detect phosphorylation at serine 14 (pSer14) of histone H2B. Histone H2B is one of the four core histones that form the nucleosome, the fundamental unit of chromatin structure. Post-translational modifications of histones, including phosphorylation, acetylation, and methylation, play essential roles in regulating DNA accessibility, transcription, and repair. Phosphorylation of H2B at Ser14 is a highly regulated event that is strongly associated with apoptosis, chromatin condensation, and stress-induced signaling. The Recombinant phospho-Histone H2B antibody provides researchers with a precise and reproducible tool to monitor this biologically significant modification.

Histone H2B pairs with histone H2A to form dimers that integrate into the nucleosome core. Phosphorylation at Ser14 of H2B is catalyzed by kinases such as Mst1 and correlates with programmed cell death and chromatin fragmentation. This modification is often observed in apoptotic cells, where it supports chromatin condensation and nuclear reorganization. In addition to its role in apoptosis, pSer14-H2B has been implicated in transcriptional regulation and DNA repair, making it a versatile epigenetic marker. The Recombinant phospho-Histone H2B antibody enables specific recognition of this modification, distinguishing it from unmodified H2B or phosphorylation at other sites.

In western blotting, the Recombinant phospho-Histone H2B antibody detects histone proteins carrying the pSer14 modification, allowing quantitative analysis of apoptosis and chromatin remodeling. In immunofluorescence, it produces strong nuclear signals in apoptotic cells, serving as a marker for programmed cell death. In immunohistochemistry, the antibody highlights apoptotic zones within tissues, providing valuable information about cell turnover, developmental processes, or pathological responses. It can also be applied in chromatin immunoprecipitation (ChIP) experiments to map genomic regions associated with Ser14-phosphorylated H2B, facilitating studies of chromatin remodeling under stress conditions. Recombinant production ensures lot-to-lot reproducibility and eliminates the inconsistencies often associated with polyclonal phospho-specific antibodies.

This reagent is particularly useful in cancer biology and neurobiology, where apoptosis and chromatin changes are frequent hallmarks of disease. It also supports drug discovery, serving as a readout for compounds designed to induce or inhibit programmed cell death. Synonym terms such as recombinant pSer14-H2B antibody and recombinant phospho-Ser14 histone H2B antibody broaden product accessibility for users working under different nomenclature systems.

By offering validated and reproducible detection, the Recombinant phospho-Histone H2B antibody strengthens investigations into the molecular mechanisms of apoptosis and chromatin remodeling. NSJ Bioreagents ensures strict quality control for this antibody, giving researchers confidence in its application across western blotting, immunofluorescence, immunohistochemistry, and ChIP. With its specificity for the Ser14 phosphorylation site, the Recombinant phospho-Histone H2B antibody is an essential reagent for studying the interface of cell death, chromatin biology, and transcriptional regulation.

This recombinant phospho-Histone H2B antibody reacts to Histone H2B only when phosphorylated at serine 14. No cross reactivity with other phosphorylated histones.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant phospho-Histone H2B

antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A phospho-peptide corresponding to phospho-Histone H2B (Ser14) was used as the immunogen for this recombinant phospho-Histone H2B antibody.

Storage

Store the recombinant phospho-Histone H2B antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).