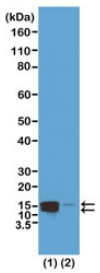
Recombinant phospho-Histone H2A/H4 Antibody (Ser1) [clone RM216] (R20231)

Catalog No.	Formulation	Size
R20231-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20231-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25

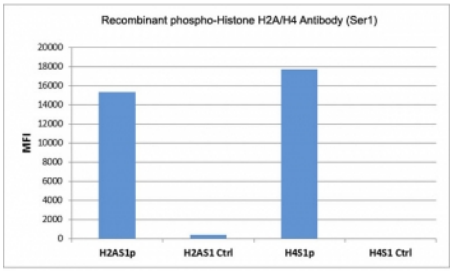
Recombinant RABBIT MONOCLONAL

Bulk quote request

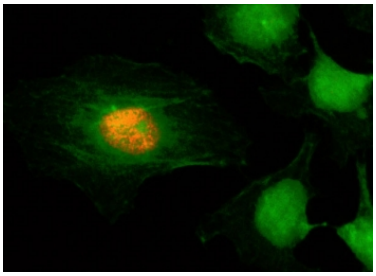
Availability	1-3 business days
Species Reactivity	All Species
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM216
Purity	Protein A purified from animal origin-free supernatant
UniProt	P16104, P62805
Gene ID	3012, 121504
Applications	Western Blot : 0.5-2ug/ml Immunocytochemistry : 1-2ug/ml ELISA : 0.2-1ug/ml
Limitations	This recombinant phospho-Histone H2A/H4 antibody is available for research use only.



Western blot test of acid extracts of HeLa cells treated (1) or non-treated (2) with Nocodazole, using recombinant phospho-Histone H2A/H4 antibody at 0.5 ug/ml, showed both Histone H2A and H4 phosphorylated at Serine 1 in HeLa cells.



This recombinant phospho-Histone H2A/H4 antibody specifically reacts to both Histone H2A and H4 phosphorylated at Serine 1 (H2AS1p and H4S1p).



ICC/IF staining of HeLa cells using recombinant phospho-Histone H2A/H4 antibody (red). Actin filaments have been labeled with fluorescein phalloidin (green).

Description

The Recombinant phospho-Histone H2A/H4 antibody is a recombinant reagent engineered to specifically detect phosphorylation at serine 1 (pSer1) on both histone H2A and histone H4. Histones are fundamental components of chromatin, responsible for packaging DNA into nucleosomes and regulating access to the genome. Post-translational modifications of histones, such as phosphorylation, acetylation, and methylation, play critical roles in epigenetic regulation of transcription, DNA repair, and cell cycle progression. The ability of this antibody to recognize the pSer1 site on H2A and H4 makes it a powerful tool for dissecting chromatin biology and the molecular mechanisms of genome regulation.

Histone H2A and histone H4 are core histones that, along with H2B and H3, assemble into the nucleosome, the repeating unit of chromatin. Phosphorylation at serine 1 of H2A and H4 occurs during chromatin remodeling, DNA replication, and DNA damage repair. This modification is thought to alter the electrostatic interactions between histones and DNA, leading to a more relaxed chromatin state that facilitates access by transcription factors or DNA repair machinery. The Recombinant phospho-Histone H2A/H4 antibody provides the specificity needed to monitor these phosphorylation events with high fidelity.

In western blotting, the Recombinant phospho-Histone H2A/H4 antibody detects histone proteins carrying the pSer1 modification, allowing researchers to evaluate changes in phosphorylation status under different experimental conditions. In immunofluorescence, it enables visualization of nuclear foci enriched in phosphorylated histones, offering insights into chromatin remodeling dynamics. In chromatin immunoprecipitation (ChIP) assays, the antibody isolates genomic regions associated with phosphorylated H2A and H4, supporting studies of transcriptional regulation and DNA repair. Recombinant design ensures batch-to-batch consistency and eliminates the variability often encountered with polyclonal phospho-specific reagents.

This antibody is especially useful in studies of DNA damage signaling, as phosphorylation of histones is a rapid cellular response to genotoxic stress. It also supports research into epigenetic regulation during cell division, where histone phosphorylation contributes to chromatin condensation and segregation. Synonym terms such as recombinant pSer1-H2A/H4 antibody and recombinant phospho-Ser1 histone H2A/H4 antibody improve product visibility and accessibility for researchers using alternate nomenclature.

By offering validated and reproducible detection, the Recombinant phospho-Histone H2A/H4 antibody empowers researchers to explore phosphorylation-dependent chromatin dynamics. NSJ Bioreagents provides this antibody under strict quality control standards, ensuring reliable performance across western blotting, immunofluorescence, and ChIP. With its high specificity for the pSer1 modification, the Recombinant phospho-Histone H2A/H4 antibody is an indispensable tool for unraveling the role of histone phosphorylation in gene regulation and DNA repair.

This recombinant phospho-Histone H2A/H4 antibody reacts to Histone H2A or Histone H4 phosphorylated at Serine 1. No cross reactivity with other phosphorylated Histones.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant phospho-Histone H2A/H4 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A phospho-peptide corresponding to phospho-Histone H2A (pSer1) was used as the immunogen for this recombinant phospho-Histone H2A/H4 antibody.

Storage

Store the recombinant phospho-Histone H2A/H4 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).