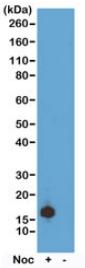
Recombinant phospho-Histone H3 Antibody (Ser10) [clone RM163] (R20232)

Catalog No.	Formulation	Size
R20232-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20232-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25

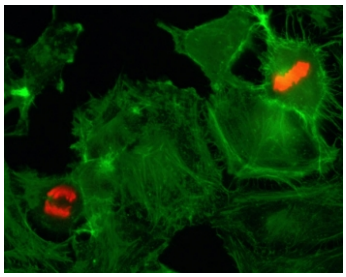
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	All Species
Format	Purified
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM163
Purity	Protein A purified from animal origin-free supernatant
UniProt	P84243
Gene ID	8350
Applications	Western Blot : 0.5-2ug/ml Immunocytochemistry : 0.5-2ug/ml ELISA : 0.2-1ug/ml
Limitations	This recombinant phospho-Histone H3 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 H3 antibody at 0.5 ug/ml, showed a band of Histone H3 phosphorylated at serine 10 in HeLa cells.



ICC/IF of HeLa cells using recombinant phospho-Histone H3 antibody (red). Actin filaments have been labeled with fluorescein phalloidin (green).

Description

The Recombinant phospho-Histone H3 antibody is a recombinant reagent designed to specifically recognize phosphorylation at serine 10 (pSer10) of histone H3. Histone H3 is a core nucleosomal protein that plays a central role in packaging DNA and regulating access to genetic information. Post-translational modifications of histones, including phosphorylation, are key mechanisms in epigenetic regulation and chromatin remodeling. The pSer10 site of histone H3 is especially significant, as it is tightly linked to chromosome condensation during mitosis and meiosis as well as to transcriptional activation of immediate early genes. The Recombinant phospho-Histone H3 antibody provides researchers with a reliable tool to investigate these phosphorylation-dependent processes.

Histone H3, together with H2A, H2B, and H4, forms the histone octamer around which DNA is wrapped to create nucleosomes. Phosphorylation at Ser10 of H3 occurs at distinct points in the cell cycle and is mediated by kinases such as Aurora B. During mitosis, pSer10-H3 marks pericentromeric chromatin, facilitating proper condensation and segregation of chromosomes. In interphase cells, pSer10-H3 phosphorylation is associated with transcriptional activation of genes involved in stress responses and growth factor signaling. By specifically detecting this modification, the Recombinant phospho-Histone H3 antibody allows precise monitoring of chromatin states during both division and gene regulation.

In western blotting, the Recombinant phospho-Histone H3 antibody detects H3 phosphorylated at Ser10, enabling quantification of mitotic indices or transcriptional activation in cultured cells. In immunofluorescence, it highlights mitotic chromatin with strong nuclear staining, serving as a reliable marker of cell cycle progression. In chromatin immunoprecipitation (ChIP) assays, the antibody enriches for genomic regions associated with pSer10-H3, facilitating studies of epigenetic regulation at specific promoters or enhancers. Recombinant design ensures reproducibility and consistency, reducing lot-to-lot variation common with polyclonal phospho-specific antibodies.

This antibody is particularly important for cancer research, where deregulated histone phosphorylation contributes to uncontrolled proliferation. It is also valuable in developmental biology, where precise control of histone modifications dictates differentiation and gene expression programs. Synonym phrases such as recombinant pSer10-H3 antibody and recombinant phospho-Ser10 histone H3 antibody expand accessibility for investigators referencing alternate nomenclature.

By delivering validated and reproducible detection, the Recombinant phospho-Histone H3 antibody provides researchers with a robust tool to investigate chromatin modifications and their biological outcomes. NSJ Bioreagents ensures strict quality control for this antibody, offering scientists confidence in applications such as western blotting, immunofluorescence, and ChIP. With its high specificity for the Ser10 phosphorylation site, the Recombinant phospho-Histone H3 antibody is indispensable for studying chromatin regulation, mitosis, and transcriptional activation.

This recombinant phospho-Histone H3 antibody reacts to Histone H3 phosphorylated at Serine 10. No cross reactivity with other phosphorylated histones.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant phospho-Histone H3 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A phospho-peptide corresponding to phospho-Histone H3 (Ser10) was used as the immunogen for this recombinant phospho-Histone H3 antibody.

Storage

Store the recombinant phospho-Histone H3 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).