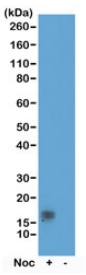
Recombinant phospho-Histone H3 Antibody (pThr11) [clone RM164] (R20235)

Catalog No.	Formulation	Size
R20235-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20235-25UG	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	RM164
Purity	Protein A purified from animal origin-free supernatant
UniProt	P84243
Gene ID	8350
Applications	Western Blot : 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 threonine 11 in HeLa cells.

Description

The Recombinant phospho-Histone H3 antibody is a recombinant reagent designed to detect phosphorylation at threonine 11 (pThr11) of histone H3. Histone H3 is a central component of the nucleosome and is subject to a wide variety of post-translational modifications that collectively shape chromatin structure and gene expression. While

phosphorylation at Ser10 and Thr3 are well-characterized marks of mitosis, phosphorylation at Thr11 represents a distinct modification with unique functional implications. It has been linked to transcriptional activation at specific promoters and to the regulation of chromatin compaction during early stages of mitosis. The Recombinant phospho-Histone H3 antibody provides researchers with a precise and reproducible reagent to investigate this modification.

Histone H3 contains a flexible N-terminal tail that protrudes from the nucleosome and is a primary site for epigenetic modifications. Thr11 is situated close to Lys9, a residue whose methylation state strongly influences heterochromatin formation. The addition of a phosphate group at Thr11 can alter the recruitment of chromatin modifiers to Lys9, effectively coupling phosphorylation with histone methylation dynamics. This Ã¢Â€Âœhistone codeÃ¢Â€Â• crosstalk makes Thr11 phosphorylation an important marker for understanding how combinatorial modifications regulate chromatin accessibility and gene expression. The Recombinant phospho-Histone H3 antibody enables targeted detection of this modification, offering insights into both cell cycle progression and transcriptional regulation.

In laboratory applications, the Recombinant phospho-Histone H3 antibody is highly versatile. In western blotting, it detects H3 proteins carrying the pThr11 modification, providing a quantitative measure of phosphorylation status under different conditions. In immunofluorescence, it produces distinct nuclear staining patterns that shift during the cell cycle, allowing visualization of chromatin dynamics in real time. In chromatin immunoprecipitation (ChIP) assays, the antibody enriches DNA regions associated with pThr11-H3, facilitating the mapping of transcriptionally active promoters. The recombinant origin of this antibody ensures batch-to-batch reproducibility, reducing variability associated with polyclonal phospho-specific antibodies.

This reagent is particularly valuable in studies of oncogenesis, where aberrant histone phosphorylation is linked to dysregulated transcription and uncontrolled proliferation. It is also important in developmental biology, where Thr11 phosphorylation contributes to lineage-specific transcriptional programs. Synonym phrases such as recombinant pThr11-H3 antibody and recombinant phospho-Thr11 histone H3 antibody improve accessibility for scientists working under different naming conventions.

By providing validated and reproducible detection, the Recombinant phospho-Histone H3 antibody supports robust analysis of chromatin modifications that regulate transcription and mitosis. NSJ Bioreagents ensures rigorous quality control for this antibody, giving researchers confidence in western blotting, immunofluorescence, and ChIP applications. With its unique specificity for the Thr11 phosphorylation site, the Recombinant phospho-Histone H3 antibody is a key tool for dissecting the interplay between histone phosphorylation, methylation, and chromatin remodeling.

This recombinant phospho-Histone H3 antibody reacts to Histone H3 phosphorylated at Threonine 11. 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 (Thr11) 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).