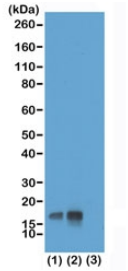
Recombinant phospho-Histone H3 Antibody (pThr3) [clone RM159] (R20233)

Catalog No.	Formulation	Size
R20233-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20233-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25

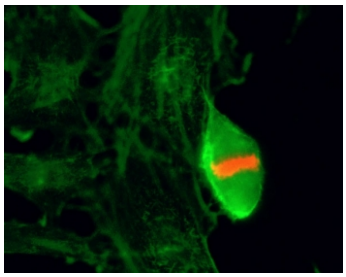
Recombinant RABBIT MONOCLONAL

Bulk quote request

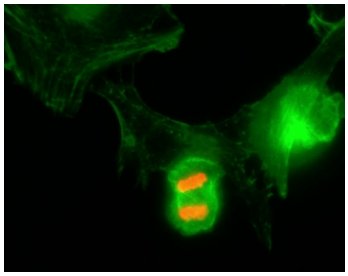
Availability	1-3 business days
Species Reactivity	All Species
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM159
Purity	Protein A purified from animal origin-free supernatant
UniProt	P84243
Gene ID	8350
Applications	Western Blot : 0.1-1ug/ml Immunocytochemistry : 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 non-treated (1) or treated (2) with Nocodazole, and recombinant Histone H3.3 (3), using recombinant phospho-Histone H3 antibody at 0.1 ug/ml, showed a band of Histone H3 phosphorylated at Threonine 3 in HeLa cells.



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



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 that selectively detects phosphorylation of histone H3 at threonine 3 (pThr3). Histone H3 is one of the four core histones that form the nucleosome and serves as a central platform for epigenetic regulation. The phosphorylation of threonine 3 is a distinct modification with functional roles that differ from other histone H3 phosphorylation events, such as those at serine 10 or serine 28. pThr3 is strongly linked to mitotic progression, particularly at centromeres, where it contributes to accurate chromosome alignment and segregation. The Recombinant phospho-Histone H3 antibody enables precise detection of this phosphorylation site, providing researchers with a powerful tool for investigating cell division and chromatin regulation.

Histone H3 modifications act as dynamic signals that coordinate transcriptional activity and chromatin architecture. The pThr3 mark is deposited by kinases such as Haspin, a mitotic regulator that ensures proper centromere function and kinetochore assembly. Unlike pSer10, which is broadly distributed along chromatin during mitosis, pThr3 is enriched at centromeric regions and is crucial for recruitment of chromosomal passenger complexes. Disruption of this modification has been linked to mitotic errors and genomic instability, underscoring its importance in maintaining chromosomal integrity. The Recombinant phospho-Histone H3 antibody specifically detects this centromere-associated phosphorylation, making it a valuable addition to the toolkit for studying mitosis.

In western blotting, the Recombinant phospho-Histone H3 antibody identifies proteins carrying the pThr3 modification, enabling quantification of mitotic activity in cultured cells. In immunofluorescence, it produces a characteristic centromere-associated nuclear staining pattern, distinguishing it from the more diffuse labeling seen with pSer10 antibodies. In chromatin immunoprecipitation (ChIP), the antibody enriches genomic regions containing pThr3-H3, facilitating studies of centromere-specific chromatin dynamics. Recombinant expression ensures consistent specificity and sensitivity across batches, avoiding the variability often seen with polyclonal phospho-specific antibodies.

This antibody is particularly relevant in cancer research, where abnormal kinase activity affecting histone phosphorylation can lead to chromosome segregation defects and aneuploidy. It is also valuable in cell cycle studies, developmental biology, and drug discovery efforts that target mitotic regulators such as Haspin. Synonym terms such as recombinant pThr3-H3 antibody and recombinant phospho-Thr3 histone H3 antibody broaden accessibility for users searching under alternate nomenclature.

By providing validated and reproducible detection, the Recombinant phospho-Histone H3 antibody supports high-quality research into the molecular basis of mitotic control and chromatin remodeling. NSJ Bioreagents delivers this antibody under rigorous quality control standards, giving investigators confidence in its use across western blotting, immunofluorescence, and ChIP. With its selectivity for the Thr3 phosphorylation site, the Recombinant phospho-Histone

H3 antibody is an indispensable tool for exploring centromere biology and epigenetic regulation during cell division.

This recombinant phospho-Histone H3 antibody reacts to Histone H3 phosphorylated at Threonine 3. 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 (Thr3) 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).