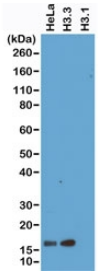
Recombinant Histone H3.3 Antibody [clone RM190] (R20253)

Catalog No.	Formulation	Size
R20253-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20253-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25

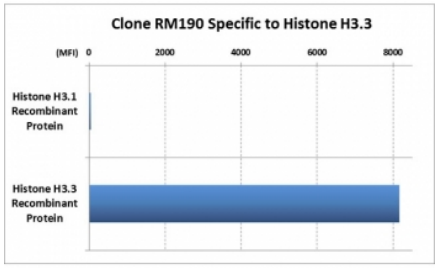
Recombinant RABBIT MONOCLONAL

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	RM190
Purity	Protein A purified from animal origin-free supernatant
UniProt	P84243
Gene ID	3020
Applications	Western Blot : 0.5-2ug/ml ELISA : 0.2-1ug/ml
Limitations	This recombinant Histone H3.3 antibody is available for research use only.



Western blot of HeLa whole cell lysate, recombinant Histone H3.3 and Histone H3.1 proteins, using recombinant Histone H3.3 antibody at 1 ug/ml.



This recombinant Histone H3.3 antibody reacts specifically to Histone H3.3. No cross reactivity with H3.1.

Description

The Recombinant Histone H3.3 antibody is a recombinant reagent designed to specifically detect histone H3.3, a non-canonical variant of histone H3 that plays a specialized role in chromatin dynamics and gene regulation. Unlike canonical H3.1 and H3.2, which are incorporated into chromatin primarily during DNA replication, H3.3 is deposited throughout the cell cycle in a replication-independent manner. This unique property allows H3.3 to be enriched at actively transcribed genes, regulatory regions, and sites of nucleosome turnover. The Recombinant Histone H3.3 antibody enables reliable detection of this histone variant, supporting studies of transcription, development, and epigenetic regulation.

Histone H3.3 differs from H3.1 and H3.2 by only a few amino acids, but these substitutions are sufficient to alter its deposition pathways and biological functions. H3.3 is incorporated into chromatin by histone chaperone complexes such as HIRA and DAXX-ATRX, which target specific genomic regions. Once deposited, H3.3 influences chromatin accessibility and helps maintain epigenetic states across cell divisions. It is also enriched at telomeres, pericentric heterochromatin, and enhancer elements, underscoring its importance in both gene activation and genome stability. The Recombinant Histone H3.3 antibody distinguishes this variant from canonical H3 proteins, ensuring accurate experimental results.

In western blotting, the Recombinant Histone H3.3 antibody detects variant-specific bands, providing information on H3.3 abundance relative to other histone isoforms. In immunofluorescence, it highlights nuclear regions enriched in transcriptionally active chromatin or sites of nucleosome remodeling. In immunohistochemistry, the antibody reveals H3.3 distribution in tissues, offering insights into developmental processes and disease states where chromatin dynamics are altered. It can also be employed in chromatin immunoprecipitation (ChIP) to isolate DNA regions associated with H3.3, enabling genome-wide mapping of its deposition. Recombinant production ensures high specificity and consistency across lots, overcoming the variability that may arise with polyclonal antibodies.

The Recombinant Histone H3.3 antibody is especially valuable in developmental biology, as H3.3 is critical for zygotic genome activation, cell fate determination, and long-term epigenetic memory. In cancer research, altered H3.3 deposition and mutations in H3.3-encoding genes have been implicated in gliomas, bone tumors, and other malignancies, making this histone variant a focus of translational studies. Synonym terms such as recombinant H3.3 antibody, recombinant histone variant H3.3 antibody, and recombinant histone H3F3A antibody expand product accessibility for researchers using alternate terminology.

By delivering validated and reproducible detection, the Recombinant Histone H3.3 antibody supports accurate exploration of chromatin dynamics and transcriptional regulation. NSJ Bioreagents supplies this antibody with rigorous quality assurance, ensuring reliability in western blotting, immunofluorescence, immunohistochemistry, and ChIP. With its specificity for H3.3, this reagent is an indispensable tool for uncovering how histone variants contribute to epigenetic regulation and genome stability.

This recombinant Histone H3.3 antibody reacts to Histone H3.3, independent of post-translational modifications. No cross reactivity with Histone H3.1 or other histone proteins.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Histone H3.3 antibody

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

Immunogen

A peptide corresponding to human Histone H3.3 was used as the immunogen for this recombinant Histone H3.3 antibody.

Storage

Store the recombinant Histone H3.3 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).