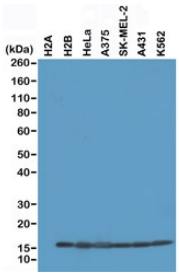
Histone H2B Antibody / HIST1H2B Core Chromatin Structure Antibody [clone RM230] (R20249)

Catalog No.	Formulation	Size
R20249-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20249-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25 ug

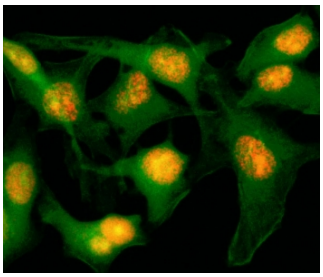
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM230
Purity	Protein A purified from animal origin-free supernatant
UniProt	P06899
Gene ID	8349
Applications	Western blot: 0.1-1ug/ml Immunocytochemistry: 0.5-1ug/ml ELISA: 0.2-1ug/ml
Limitations	This recombinant Histone H2B antibody is available for research use only.



Histone H2B Antibody / HIST1H2B Core Chromatin Structure Antibody (clone RM230) for WB. Western blot analysis of HIST1H2B / Histone H2B in recombinant Histone H2A protein, recombinant Histone H2B protein, and human cell lysates including HeLa, A375, SK-MEL-2, A431, and K562 using Histone H2B Antibody / HIST1H2B Core Chromatin Structure Antibody. A band is detected at the predicted molecular weight corresponding to Histone H2B, consistent with nuclear chromatin-associated histone expression and nucleosome core protein distribution across multiple cell types.



Histone H2B Antibody / HIST1H2B Core Chromatin Structure Antibody (clone RM230) for IF. Immunofluorescence analysis of HIST1H2B / Histone H2B in human HeLa cells using Histone H2B Antibody / HIST1H2B Core Chromatin Structure Antibody. Strong nuclear staining is observed (red), consistent with chromatin-associated localization of Histone H2B within the nucleus, while actin filaments are visualized in the cytoplasm (green), highlighting cell morphology and confirming nuclear-specific chromatin signal.

Description

Histone H2B (HIST1H2B) is a core nucleosomal protein that plays a central role in chromatin architecture, genome organization, and epigenetic regulation of gene expression. As a fundamental component of the nucleosome, H2B contributes to the structural framework that packages DNA into chromatin while also serving as a dynamic regulatory platform for chromatin-based processes. Histone H2B Antibody / HIST1H2B Core Chromatin Structure Antibody (clone RM230) is designed to detect total Histone H2B, providing a foundational marker for chromatin content and nucleosome integrity across diverse biological systems.

HIST1H2B antibody, also referred to as Histone H2B antibody and H2B antibody in the literature, recognizes one of the four canonical histone proteins that form the nucleosome octamer. H2B associates with H2A to form a heterodimer, which is incorporated alongside the H3-H4 tetramer to generate the nucleosome core particle. This structure establishes the repeating unit of chromatin and governs DNA accessibility, compaction, and higher-order folding. This antibody is part of a broader collection of Histone H2B antibodies used to study chromatin structure, histone modifications, and epigenetic regulation.

This recombinant rabbit monoclonal clone RM230 antibody is uniquely positioned as a central reference tool for histone biology. Detection of total H2B provides critical context for interpreting H2B post-translational modifications, including phosphorylation at Ser14 and acetylation at Lys5 and Lys11. As such, this antibody functions as an anchor for chromatin normalization and comparative analysis across modification-specific H2B antibodies.

At the molecular level, H2B contributes to nucleosome stability through its interactions with DNA and other histone proteins. Its N-terminal tail extends outward from the nucleosome core, providing a platform for regulatory modifications, while its core domain stabilizes DNA wrapping around the nucleosome. This dual structural and regulatory role positions H2B as a key mediator of chromatin dynamics.

Histone H2B undergoes a wide range of post-translational modifications, including acetylation, phosphorylation, ubiquitination, and methylation. These modifications function in a coordinated manner to regulate transcriptional activation, elongation, DNA repair, and chromatin remodeling. Notably, H2B ubiquitination has been shown to influence downstream methylation of histone H3, highlighting cross-talk between histone marks and reinforcing the central role of H2B in epigenetic signaling networks.

In transcriptional regulation, H2B plays an active role in nucleosome turnover and chromatin remodeling at promoters and gene bodies. Its dynamic exchange within nucleosomes allows rapid adaptation of chromatin structure in response to transcriptional and environmental cues. This flexibility is essential for maintaining appropriate gene expression programs.

H2B is also involved in genome stability and DNA damage response pathways, where it contributes to chromatin reorganization and repair factor recruitment. Its structural integrity is critical for preserving chromatin architecture during replication and repair processes.

H2B is ubiquitously expressed across cell types and tissues, reflecting its essential role in maintaining chromatin integrity. Unlike modification-specific histone marks, total H2B levels remain relatively stable, making it a reliable internal reference for chromatin-associated studies.

At the cellular level, Histone H2B localizes to the nucleus and is distributed throughout chromatin. Its uniform presence across genomic regions distinguishes it from regulatory histone modifications that exhibit localized enrichment patterns.

This antibody supports detection of total Histone H2B, enabling investigation of nucleosome organization, chromatin structure, histone modification context, and epigenetic regulation of gene expression, while providing a critical normalization reference for histone-based assays.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Histone H2B Antibody / HIST1H2B Core Chromatin Structure Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A peptide corresponding to the C-terminus of human Histone H2B was used as the immunogen for this Histone H2B Antibody / HIST1H2B Core Chromatin Structure Antibody.

Storage

Store the recombinant Histone H2B antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

Histone H2B antibody, HIST1H2B core histone antibody, H2B chromatin antibody, histone H2B nuclear antibody

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