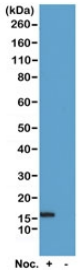
Phospho-Histone H2B Antibody pSer14 / HIST1H2B Apoptotic Chromatin Marker Antibody [clone RM238] (R20243)

Catalog No.	Formulation	Size
R20243-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20243-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25

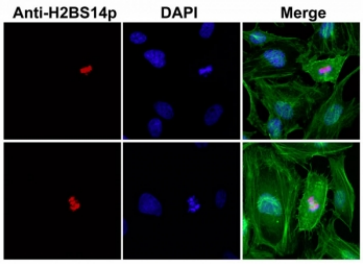
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM238
Purity	Protein A purified from animal origin-free supernatant
UniProt	P33778
Gene ID	3018
Applications	Western Blot : 0.5-2ug/ml Immunocytochemistry : 1-2ug/ml ELISA : 0.2-1ug/ml
Limitations	This Phospho-Histone H2B antibody is available for research use only.



Phospho-Histone H2B Antibody pSer14 / HIST1H2B Apoptotic Chromatin Marker Antibody (clone RM238) for WB. Western blot analysis of HIST1H2B / Histone H2B Ser14 phosphorylation (H2B pS14) in acid extracts of human HeLa cells untreated (-) or treated (+) with nocodazole using Phospho-Histone H2B Antibody pSer14 / HIST1H2B Apoptotic Chromatin Marker Antibody. A band is detected at the predicted molecular weight corresponding to phosphorylated Histone H2B, consistent with induction of apoptosis-associated chromatin condensation and cell cycle stress signaling.



Phospho-Histone H2B Antibody pSer14 / HIST1H2B Apoptotic Chromatin Marker Antibody (clone RM238) for IF. Immunofluorescence analysis of HIST1H2B / Histone H2B Ser14 phosphorylation (H2B pS14) in human HeLa cells using Phospho-Histone H2B Antibody pSer14 / HIST1H2B Apoptotic Chromatin Marker Antibody. Discrete nuclear staining is observed (red), consistent with localized chromatin condensation in apoptotic cells, while nuclei are counterstained with DAPI (blue) and actin filaments are visualized in the cytoplasm (green), confirming nuclear-specific apoptotic chromatin signal.

Description

Histone H2B (HIST1H2B) phosphorylation at serine 14 is a well-established chromatin modification that plays a central role in apoptosis-associated chromatin remodeling and nuclear condensation. Phospho-Histone H2B Antibody pSer14 / HIST1H2B Apoptotic Chromatin Marker Antibody (clone RM238) is designed to detect Histone H2B phosphorylated at serine 14, providing a highly specific marker of apoptotic chromatin states and programmed cell death. This antibody is part of a broader collection of Histone H2B antibodies used to study chromatin structure, histone modifications, and epigenetic regulation.

HIST1H2B antibody, also referred to as Histone H2B antibody and H2B pS14 antibody in the literature, recognizes a phosphorylation event that occurs early during apoptosis and is tightly linked to chromatin condensation. This modification is catalyzed by apoptosis-associated kinases, including Mst1, which are activated during caspase-dependent signaling pathways.

This recombinant rabbit monoclonal clone RM238 antibody is uniquely positioned for studies of apoptosis and chromatin dynamics during cell death. H2B Ser14 phosphorylation is a defining molecular event that coincides with nuclear shrinkage, chromatin compaction, and DNA fragmentation, all hallmark features of apoptotic progression.

At the molecular level, phosphorylation of H2B at Ser14 alters nucleosome interactions and promotes higher-order chromatin condensation. This modification facilitates the transition from an open or transcriptionally active chromatin state to a highly compacted structure characteristic of apoptotic nuclei.

Unlike acetylation marks such as H2BK5ac and H2BK11ac that promote chromatin accessibility, H2B pS14 represents a functional shift toward chromatin condensation and transcriptional shutdown. Its presence reflects irreversible commitment to apoptotic pathways rather than reversible gene regulatory processes.

This modification is widely used as a chromatin-based apoptosis marker across diverse biological systems, complementing assays that measure caspase activation, DNA fragmentation, or membrane changes. Its nuclear localization provides a direct readout of chromatin structural changes during cell death.

In addition to its role in apoptosis, H2B Ser14 phosphorylation may contribute to broader stress-response pathways where chromatin condensation is required. However, its strongest association remains with programmed cell death signaling.

At the cellular level, H2B Ser14 phosphorylation localizes to the nucleus and is enriched in condensed chromatin regions of apoptotic cells. Staining is typically absent in healthy, proliferating cells, making it a highly specific indicator of apoptotic chromatin remodeling.

This antibody supports detection of Ser14-phosphorylated Histone H2B, enabling investigation of apoptosis, chromatin condensation, and cell death-associated epigenetic transitions with high specificity.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Phospho-Histone H2B Antibody pSer14 / HIST1H2B Apoptotic Chromatin Marker Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A phospho-peptide corresponding to phospho-Histone H2B (Ser14) was used as the immunogen for this Phospho-Histone H2B Antibody pSer14 / HIST1H2B Apoptotic Chromatin Marker Antibody.

Storage

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

Alternate Names

Histone H2B Ser14 phosphorylation antibody, H2B pS14 apoptosis antibody, phospho histone H2B Ser14 antibody, H2B Ser14 phospho chromatin antibody