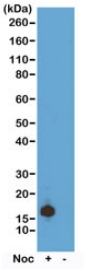
Phospho-Histone H3 (Ser10) Antibody / Mitotic Signaling and Chromatin Activation Antibody [clone RM163] (R20232)

Catalog No.	Formulation	Size
R20232-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20232-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25

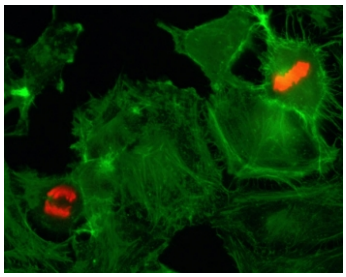
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM163
Purity	Protein A purified from animal origin-free supernatant
UniProt	P84243
Gene ID	8350
Applications	Western blot: 0.5-2ug/ml Immunocytochemistry: 0.5-2ug/ml ELISA: 0.2-1ug/ml
Limitations	This recombinant phospho-Histone H3 antibody is available for research use only.



Phospho-Histone H3 (Ser10) Antibody / Mitotic Signaling and Chromatin Activation Antibody (clone RM163) for WB. Western blot analysis of HIST1H3A / Histone H3 Ser10 phosphorylation in acid extracts of human HeLa cells treated with nocodazole compared to non-treated controls using Phospho-Histone H3 (Ser10) Antibody / Mitotic Signaling and Chromatin Activation Antibody. A band is detected at the predicted molecular weight of approximately 15 kDa, corresponding to Histone H3, with increased signal intensity in nocodazole-treated samples reflecting mitotic arrest and Aurora kinase-driven Ser10 phosphorylation.



Phospho-Histone H3 (Ser10) Antibody / Mitotic Signaling and Chromatin Activation Antibody (clone RM163) for IF. Immunofluorescence analysis of HIST1H3A / Histone H3 Ser10 phosphorylation in human HeLa cells using Phospho-Histone H3 (Ser10) Antibody / Mitotic Signaling and Chromatin Activation Antibody (red). Strong nuclear staining is observed in mitotic cells, highlighting condensed chromatin consistent with Ser10 phosphorylation during mitosis, while interphase cells show minimal signal. Actin filaments are labeled with fluorescein phalloidin (green), outlining cell morphology, and demonstrate clear contrast with the nuclear phospho-Histone H3 signal.

Description

Histone H3 (HIST1H3A) is a core chromatin protein whose phosphorylation at serine 10 serves as a dynamic regulatory event during mitosis. Phospho-Histone H3 (Ser10) Antibody / Mitotic Signaling and Chromatin Activation Antibody (clone RM163) is designed to detect this modification as a readout of kinase-driven mitotic signaling pathways. This antibody is part of a broader collection of Histone H3 antibodies used to study chromatin structure, histone modifications, and epigenetic regulation.

HIST1H3A antibody, also referred to as Histone H3 antibody and H3S10ph antibody in the literature, recognizes a phosphorylation event primarily mediated by Aurora B kinase. This modification is rapidly induced during mitotic entry and reflects active signaling processes that regulate chromosome condensation and segregation.

This Phospho-Histone H3 (Ser10) Antibody is uniquely positioned for phosphorylation-dependent signaling studies rather than static proliferation measurement. In western blot applications, Ser10 phosphorylation levels increase significantly under mitotic induction conditions, allowing clear distinction between basal and activated states and enabling direct assessment of kinase activity.

In immunofluorescence applications, phospho-Histone H3 localizes to condensed chromatin within the nucleus, producing strong, punctate nuclear staining in mitotic cells. This enables visualization of chromatin architecture and mitotic progression at the single-cell level, complementing biochemical data with spatial resolution.

The transient and tightly regulated nature of Ser10 phosphorylation makes it a sensitive indicator of mitotic signaling dynamics. Unlike markers that simply label proliferating cells, this modification reflects active pathway engagement and can be used to monitor changes in response to experimental perturbations.

At the molecular level, Ser10 phosphorylation integrates into broader epigenetic regulatory networks, interacting with additional histone modifications to coordinate chromatin accessibility and structural transitions during cell division. These features make HIST1H3A antibody reagents valuable tools for studying both signaling pathways and chromatin regulation.

Clone RM163 antibody enables detection of phosphorylation-dependent chromatin changes across both biochemical and imaging platforms, supporting detailed analysis of mitotic signaling and chromatin activation states.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Phospho-Histone H3 (Ser10) Antibody / Mitotic Signaling and Chromatin Activation Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A phospho-peptide corresponding to phospho-Histone H3 (Ser10) was used as the immunogen for this Phospho-Histone H3 (Ser10) Antibody / Mitotic Signaling and Chromatin Activation Antibody.

Storage

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

Alternate Names

Histone H3 Ser10 phosphorylation antibody, H3S10ph signaling antibody, Aurora B substrate antibody, phospho-H3 mitotic signaling antibody

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