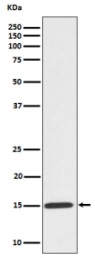
Phospho-Histone H3 (pSer10) Antibody / HIST1H3A Mitotic Chromatin Marker Antibody [clone 31H82] (FY12171)

Catalog No.	Formulation	Size
FY12171	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	31H82
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P68431
Applications	Western blot: 1:500-1:2000 Immunohistochemistry: 1:50-1:200 Immunocytochemistry/Immunofluorescence: 1:50-1:200
Limitations	This Phospho-Histone H3 (pSer10) antibody is available for research use only.



Phospho-Histone H3 (pSer10) Antibody / HIST1H3A Mitotic Chromatin Marker Antibody for WB. Western blot analysis of Phospho-Histone H3 (S10) expression in colcemid-treated human HeLa cell lysate using Phospho-Histone H3 (pSer10) Antibody / HIST1H3A Mitotic Chromatin Marker Antibody. A strong band is detected at the predicted molecular weight of approximately 15 kDa, consistent with Histone H3 and increased Ser10 phosphorylation in mitotically arrested cells.

Description

Histone H3 (HIST1H3A) is a core nucleosomal protein that regulates chromatin structure and gene accessibility, with phosphorylation at serine 10 serving as a defining feature of mitotic chromatin remodeling. Phospho-Histone H3 (pSer10) Antibody / HIST1H3A Mitotic Chromatin Marker Antibody (clone 31H82) is developed to detect this conserved mitosis-associated modification with high specificity for condensed chromatin. 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 tightly linked to chromosome condensation during the G2 to M phase transition. This modification is catalyzed primarily by Aurora B kinase and appears rapidly as cells commit to mitosis, producing strong nuclear labeling confined to condensed chromosomes.

This Phospho-Histone H3 (pSer10) Antibody / HIST1H3A Mitotic Chromatin Marker Antibody is uniquely positioned as a gold-standard mitotic index marker. Unlike broader proliferation markers that label all cycling cells, Ser10 phosphorylation specifically identifies cells in late G2 and M phase, allowing precise quantification of actively dividing populations in both cultured systems and tissue samples.

The staining pattern is highly characteristic, with intense nuclear signal in mitotic figures and minimal background in interphase cells. This sharp contrast enables clear identification of mitotic cells even in heterogeneous populations. In tissue contexts, labeled cells are typically localized within proliferative compartments such as epithelial basal layers or tumor growth zones, reinforcing its value for assessing mitotic activity.

At the molecular level, Ser10 phosphorylation contributes directly to chromatin condensation and facilitates recruitment of proteins required for chromosome segregation. It also participates in coordinated histone modification patterns that regulate chromatin dynamics during cell division. These features position HIST1H3A antibody reagents as essential tools for studying both mitotic progression and chromatin biology.

Clone 31H82 antibody provides consistent detection of Ser10-phosphorylated Histone H3, supporting reliable identification of mitotic chromatin and enabling accurate assessment of cell cycle dynamics.

Application Notes

Optimal dilution of the Phospho-Histone H3 (pSer10) Antibody / HIST1H3A Mitotic Chromatin Marker Antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Phospho-Histone H3 (S10) was used as the immunogen for the Phospho-Histone H3 (pSer10) Antibody / HIST1H3A Mitotic Chromatin Marker Antibody.

Storage

Store the Phospho-Histone H3 (pSer10) antibody at -20oC.

Alternate Names

Histone H3 Ser10 phosphorylation antibody, H3S10ph mitosis marker antibody, phospho-H3 mitotic marker antibody, HIST1H3A chromatin antibody

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