Histone H3.1S28ph antibody (mAb)

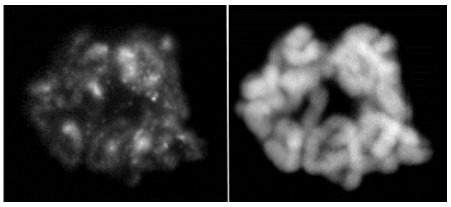
Catalog Nos: 61697, 61698

RRID: AB_2793739
Clone: 5D10D4
Isotype: IgG2b
Application(s): ICC, IF, WB
Reactivity: Human, Wide Range Predicted

Quantities: 100 µg, 10 µg
Purification: Protein G Chromatography
Host: Rat
Concentration: 1 µg/µl
Molecular Weight: 17 kDa

Background: Histone H3 is one of the core components of the nucleosome. The nucleosome is the smallest subunit of chromatin and consists of 147 base pairs of DNA wrapped around an octamer of core histone proteins (two each of Histone H2A, Histone H2B, Histone H3 and Histone H4). Chromatin is subject to a variety of chemical modifications, including post-translational modifications of the histone proteins and the methylation of cytosine residues in the DNA. Reported histone modifications include acetylation, methylation, phosphorylation, ubiquitylation, glycosylation, ADP-ribosylation, carbonylation and SUMOylation; these modifications play a major role in regulating gene expression.

There are three protein variants of Histone H3, Histone H3.1, 3.2 and 3.3. The incorporation of Histone H3.1 and H3.2 into nucleosomes is replication dependent, in contrast to Histone H3.3, which is independent of DNA synthesis and occurs throughout the cell cycle. Human Histone H3.1 and H3.3 are identical in amino acid sequences except at position 110 where H3.1 has a cysteine and H3.3 has a serine. Phosphorylation of serine 28 occurs in early mitosis when chromosomes begin to condense and during premature chromosome condensation induced in S-phase cells.



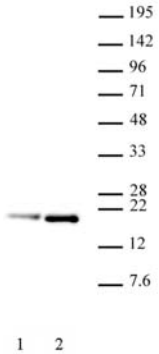
Histone H3.1S28ph antibody (mAb) (Clone 5D10D4) tested by Immunofluorescence.
Left: Formaldehyde fixed mitotic DM4 cell stained with Histone H3.1S28ph antibody (mAb).
Right: Hoechst stain.

Immunogen: This antibody was raised against a peptide corresponding to phospho-serine 28 of human Histone H3.1. This antibody does not react with Histone H3.3 phosphorylated on serine 28.

Buffer: Purified IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

Application Notes:
Applications Validated by Active Motif:
ICC/IF: 2 - 10 µg/ml dilution
WB*: 0.5 - 2 µg/ml dilution

*Note: many chromatin-bound proteins are not soluble in a low salt nuclear extract and fractionate to the pellet. Therefore, we recommend a High Salt / Sonication Protocol when preparing nuclear extracts for Western blot.



Histone H3.1S28ph antibody (mAb) (Clone 5D10D4) tested by Western blot.
Detection of Histone H3.1S28ph antibody by Western blot. The analysis was performed using 20 µg of untreated (lane 1) or colcemid treated (lane 2) HeLa nuclear extract with Histone H3.1S28ph antibody at a 1 µg/ml dilution.

Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.