

Histone H3S10ph antibody (mAb)

Catalog Nos: 61623, 61624

RRID: AB_2793707

Clone: 6G8B7

Isotype: IgG2a

Application(s): ELISA, 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.

Interestingly, phosphorylation of Ser10 on histone H3 is involved in both transcription and cell division, two events requiring opposite alterations in the degree of chromatin compaction. Ser10 in the tail of histone H3 is strongly phosphorylated early in mitosis when chromosomes begin to condense, and during premature chromosome condensation induced in S-phase cells.

Immunogen: This antibody was raised against a peptide corresponding to amino acids 1-19 including phospho-serine 10 of human Histone H3.

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: 0.5 - 2 µg/ml dilution

WB*: 0.2 - 2 µg/ml dilution

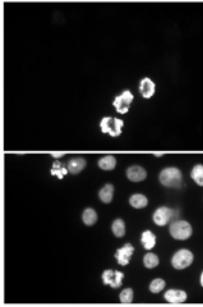
ELISA: Individual optimization required.

*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.

This antibody is also available as an AbFlex[®] engineered recombinant antibody. For details on the corresponding AbFlex Recombinant Antibody, see Catalog No. 91131.

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.

This product is for research use only and is not for use in diagnostic procedures.



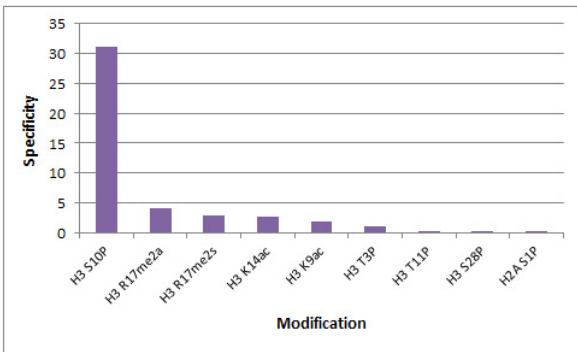
Histone H3S10ph antibody (mAb) (Clone 6G8B7) tested by immunofluorescence.

Top: HeLa cells stained with H3S10ph antibody (mAb) at a dilution of 0.2 µg/ml. Bottom: Merge with Hoechst.



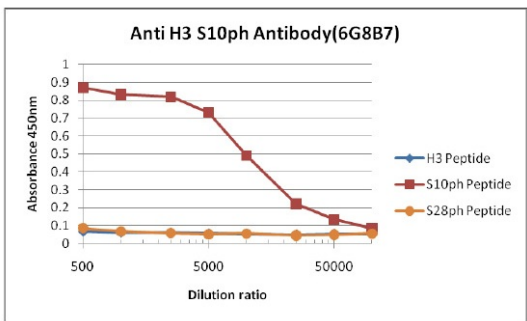
Histone H3S10ph antibody (mAb) (Clone 6G8B7) tested by Western blot.

HeLa nuclear extract (20 µg) probed with Histone H3S10ph antibody (mAb) at a dilution of 2 µg/ml.



Histone H3S10ph antibody (mAb) (Clone 6G8B7) specificity tested by Peptide Array analysis.

Peptide array analysis was used to confirm the specificity of this antibody for its intended modification. Histone H3S10ph antibody (mAb) was applied to Active Motif's MODified™ Histone Peptide Array (Catalog No. 13001) at a dilution of 0.3 µg/ml. The arrays were scanned with ArrayAnalysis Software 7 and the results plotted. Recognition of the H3 serine 10 peptides by the antibody may be blocked by modifications at arginine 8, lysine 9, threonine 11 or lysine 14.



Histone H3S10ph antibody (mAb) (Clone 6G8B7) tested by ELISA.

BSA conjugated peptides were probed to show the specificity of the H3S10ph antibody (mAb). The range of antibody dilution used is as shown.