

## Histone H3S10ph antibody (pAb)

**Catalog Nos:** 39253, 39254

**RRID:** AB\_2793206

**Isotype:** Serum

**Application(s):** ChIP, DB, ICC, IF, WB

**Reactivity:** Human, Wide Range Predicted

**Volumes:** 100 µl, 10 µl

**Purification:** None

**Host:** Rabbit

**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 Histone H3 phospho Ser10 antibody was raised against a peptide including phospho-serine 10 of histone H3.

**Buffer:** Rabbit serum containing 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

### Application Notes:

Applications Validated by Active Motif:

ChIP: 10 µl per ChIP

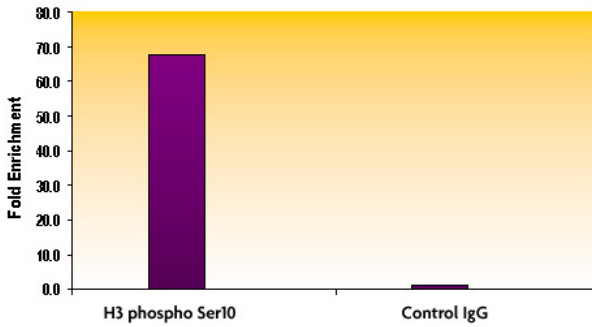
ICC/IF: 1:500 - 1:2,000 dilution

WB: 1:5,000 - 1:50,000 dilution

For Histone H3S10ph, we also offer AbFlex<sup>®</sup> Histone H3S10ph Recombinant Antibody (rAb). For details, see Catalog No. 91131.

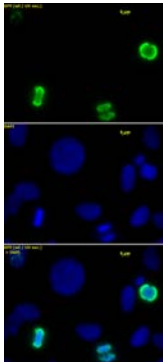
**Storage and Guarantee:** Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This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



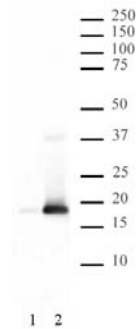
#### Histone H3 phospho Ser10 antibody tested by ChIP analysis.

Chromatin IP performed using the ChIP-IT<sup>®</sup> Express Kit (Catalog No. 53008) and HeLa Chromatin ( $1.5 \times 10^6$  cell equivalents per ChIP) using 10  $\mu$ l of Histone H3 phospho Ser10 antibody or the equivalent amount of rabbit IgG as a negative control. Real time, quantitative PCR (RT-qPCR) was performed on DNA purified from each of the ChIP reactions using a primer pair specific for the GAPDH gene promoter. Data are presented as Fold Enrichment of the ChIP antibody signal versus the negative control IgG using the ddCT method.



#### Histone H3 phospho Ser10 antibody tested by immunofluorescence.

Staining of HeLa cells with Histone H3 phospho Ser10 antibody (1:2,000 dilution, top panel) and DAPI (middle panel), and a merge of both images (bottom panel).

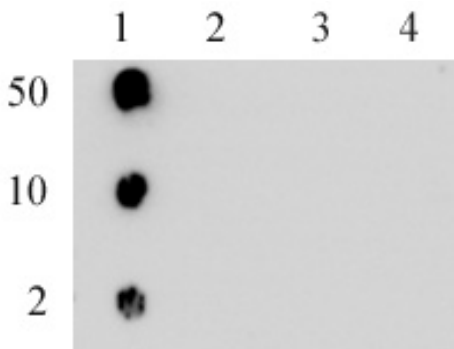


#### Histone H3 phospho Ser10 antibody tested by Western blot.

HeLa acid extract (10  $\mu$ g per lane) probed with Histone H3 phospho Ser10 antibody at a dilution of 1:20,000.

Lane 1: No treatment.

Lane 2: Cells treated with colcemid to arrest cells at mitosis.



#### Histone H3 phospho Ser10 antibody tested by dot blot analysis.

Dot blot analysis was used to confirm the specificity of Histone H3 phospho Ser10 antibody for histone H3 phospho Ser10. Phosphorylated peptides corresponding to the immunogen and a related sequence derived from histone H3 were spotted onto PVDF and probed with the antibody at 1:50,000. The amount of peptide (picomoles) spotted is indicated next to each row.

Lane 1: phospho-Ser10 peptide.

Lane 2: unmodified Ser10 peptide.

Lane 3: phospho-Ser28 peptide 4 peptide.

Lane 4: unmodified Ser28 peptide.