

AbFlex® Histone H3S10ph antibody (rAb)

Catalog Nos: 91131, 91132

RRID: AB_2793785

Isotype: IgG2a

Application(s): DB, WB

Reactivity: Human, Wide Range Predicted

Quantities: 100 µg, 10 µg

Purification: Protein A Chromatography

Host: Mouse

Concentration: 1 µg/µl

Molecular Weight: 17 kDa

Background: AbFlex® antibodies are recombinant antibodies (rAbs) that have been generated using defined DNA sequences to produce highly specific, reproducible antibodies. Each AbFlex antibody contains a 6xHis Tag, a Biotinylation Tag for enzymatic biotin conjugation using the biotin ligase, BirA, and a sortase recognition motif (LPXTG) to attach a variety of labels directly to the antibody including fluorophores, enzymatic substrates (HRP, AP), peptides, drugs as well as solid supports. AbFlex® Histone H3S10ph antibody was expressed as full-length IgG with mouse immunoglobulin heavy and light chains (IgG2a isotype) in CHO (Chinese Hamster Ovary) cells.

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). Histone H1 is a linker histone, present at the interface between the nucleosome core and DNA entry/exit points. Histone H1 is responsible for establishing higher-order chromatin structure. 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 containing phospho-serine 10 of Histone H3.

Buffer: Purified IgG in 140 mM Hepes, pH 7.5, 70 mM NaCl, 32 mM NaOAc, 0.035% sodium azide, 30% glycerol. Sodium azide is highly toxic.

Application Notes:

Applications Validated by Active Motif:

WB: 0.5 – 2 µg/ml

DB: 2 µg/ml

AbFlex® recombinant antibodies are genetically derived from DNA sequences of parental hybridoma clones. For details on the parental clone, see Catalog No. 61623.

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.



AbFlex® Histone H3S10ph antibody tested by Western blot.

20 µg of HeLa cell extracts (Lane 1 – untreated, Lane 2 – Colcemid treated) were run on SDS-PAGE and probed with AbFlex Histone H3S10ph antibody at 0.5 µg/ml.

AbFlex® Histone H3S10ph antibody specificity is shown by Dot Blot.

Recombinant peptides were spotted onto PVDF as follows: Column 1 - Histone H3S10ph; Column 2 - Histone H3S10 (non-phosphorylated); Column 3 - Histone H3.1S28ph; Column 4 - Histone H3.1S28 (non-phosphorylated); Column 5 - Histone H3.3S31ph; Column 6 - Histone H3.3S31ph (non-phosphorylated); Column 7 - Histone H3.3S28ph. The membrane was probed with AbFlex® Histone H3S10ph antibody at 2 µg/ml.

