

#1010 Store at -20 °C

# Acetyl- and Phospho-Histone H3 (Lys9 Ser10) Blocking Peptide

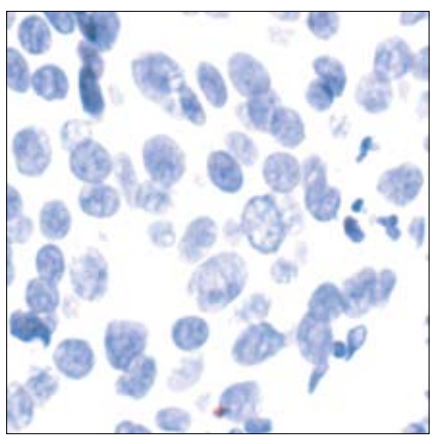
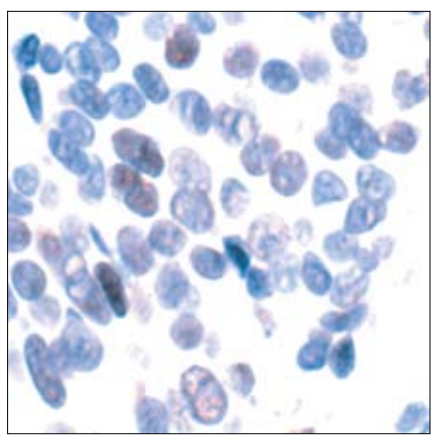
✓ 100 µg  
(10 Western mini-blot)



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This product is for *in vitro* research use only and is not intended for use in humans or animals.



Immunohistochemical staining of paraffin-embedded human breast carcinoma, using Acetyl- and Phospho-Histone H3 (Lys9/Ser10) Antibody #9711 preincubated with irrelevant control peptide (left) and Acetyl- and Phospho-Histone H3 (Lys9/Ser10) Blocking Peptide (right).

**Description:** This peptide is used to block Acetyl- and Phospho-Histone H3 (Lys9/Ser10) Antibody #9711 reactivity.

**Background:** Modulation of chromatin structure plays an important role in the regulation of transcription in eukaryotes. The nucleosome, made up of four core histone proteins (H2A, H2B, H3 and H4), is the primary building block of chromatin (1). The amino-terminal tails of core histones undergo various post-translational modifications, including acetylation, phosphorylation, methylation and ubiquitination (2-5). These modifications occur in response to various stimuli and have a direct effect on the accessibility of chromatin to transcription factors and, therefore, on gene expression (6). In most species, histone H2B is primarily acetylated at lysines 5, 12, 15 and 20 (4,7). Histone H3 is primarily acetylated at lysines 9, 14, 18 and 23 (2,3). Acetylation at Lys9 appears to have a dominant role in histone deposition and chromatin assembly in some organisms (2,3). Phosphorylation at Ser10 of histone H3 is tightly correlated with chromosome condensation during both mitosis and meiosis (8). Phosphorylation of Thr3 of

histone H3 is highly conserved among many species and is catalyzed by the kinase haspin. Immunostaining with phospho-specific antibodies in mammalian cells reveals mitotic phosphorylation of H3 Thr3 in prophase and its dephosphorylation during anaphase (9).

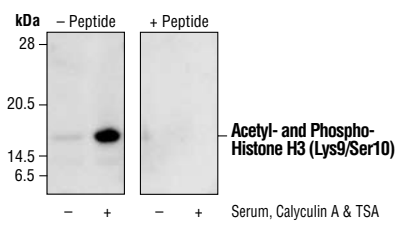
**Quality Control:** The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks Acetyl- and Phospho-Histone H3 (Lys9/Ser10) Antibody #9711 by immunohistochemistry and Western Blotting.

**Applications:** Use as a blocking reagent to evaluate the specificity of antibody reactivity in immunohistochemistry and Western blot protocols.

**Directions for Use:** For immunohistochemistry, add twice the volume of peptide as volume of antibody used in 100 µl total volume. Incubate for a minimum of 30 minutes prior to adding the entire volume to the slide. Recommended antibody dilutions can be found on the relevant product data sheet.

For Western immunoblotting, add 10 µl of antibody and 10 µl of blocking peptide to 10 ml of antibody dilution buffer, and incubate at room temperature for 30 minutes before allowing to react with the blot.

◀ **Western blot analysis of Acetyl- and Phospho-Histone H3 (Lys9/Ser10) in control and serum, calyculin A and TSA treated NIH/3T3 cell extracts of Acetyl- and Phospho-Histone H3 (Lys9/Ser10) #9711 alone (left) and the same antibody preincubated with Acetyl- and Phospho-Histone H3 (Lys9/Ser10) Blocking Peptide (right).**



**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry IC—Immunocytochemistry IF—Immunofluorescence F—Flow cytometry E—ELISA D—DELFIATM  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken X—Xenopus Z—zebra fish B—bovine All—all species expected  
Species enclosed in parentheses are predicted to react based on 100% sequence homology.

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