

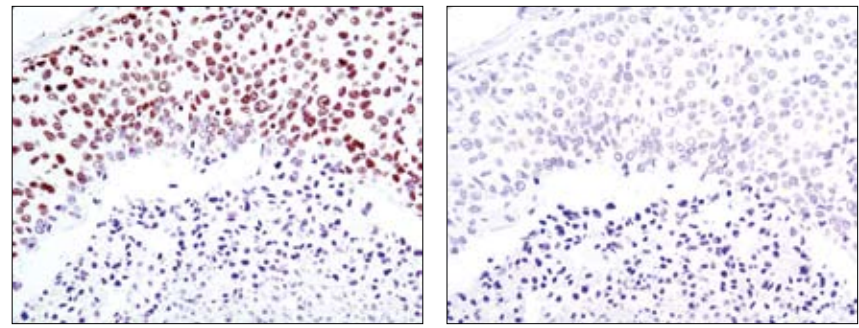
# Acetyl-Histone H3 (Lys9) Blocking Peptide

✓ 100 µg

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**Web** ■ www.cellsignaling.com

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



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Acetyl-Histone H3 (Lys9) (C5B11) Rabbit mAb #9649 in the presence of control peptide (left) or Acetyl-Histone H3 (Lys9) Blocking Peptide (right).

**Description:** This peptide is used to block Acetyl-Histone H3 (Lys9) (C5B11) Rabbit mAb #9649 and Acetyl-Histone H3 (Lys9) Antibody #9671 reactivity in immunohistochemistry protocols.

**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 Lys5, 12, 15 and 20 (4,7). Histone H3 is primarily acetylated at Lys9, 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, Ser28 and Thr11 of histone H3 is tightly correlated with chromosome condensation during both mitosis and meiosis (8-10). 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 (11).

**Quality Control:** The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks Acetyl-Histone H3 (Lys9) (C5B11) Rabbit mAb #9649 and Acetyl-Histone H3 (Lys9) Antibody #9671 signal in immunohistochemistry.

**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.

**Background References:**

- (1) Workman, J.L. and Kingston, R.E. (1998) *Annu. Rev. Biochem.* 67, 545-579.
- (2) Hansen, J.C. et al. (1998) *Biochemistry* 37, 17637-17641.
- (3) Strahl, B.D. and Allis, C.D. (2000) *Nature* 403, 41-45.
- (4) Cheung, P. et al. (2000) *Cell* 103, 263-271.
- (5) Bernstein, B.E. and Schreiber, S.L. (2002) *Chem. Biol.* 9, 1167-1173.
- (6) Jaskelioff, M. and Peterson, C.L. (2003) *Nat. Cell Biol.* 5, 395-399.
- (7) Thorne, A.W. et al. (1990) *Eur. J. Biochem.* 193, 701-713.
- (8) Hendzel, M.J. et al. (1997) *Chromosoma* 106, 348-360.
- (9) Goto, H. et al. (1999) *J. Biol. Chem.* 274, 25543-25549.
- (10) Preuss, U. et al. (2003) *Nucleic Acids Res.* 31, 878-885.
- (11) Dai, J. et al. (2005) *Genes Dev.* 19, 472-488.

**Storage:** Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. Store at -20°C.

**Companion Products:**  
 Acetyl-Histone H3 (Lys9) Antibody #9671  
 Acetyl-Histone H3 (Lys9) (C5B11) Rabbit mAb #9649