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Acetyl-Histone H4 Antibody Sampler Kit

1 Kit (4 x 20 microliters)

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Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Acetyl-Histone H4 (Lys5) (D12B3) Rabbit mAb	8647	20 µl	11 kDa	Rabbit IgG
Acetyl-Histone H4 (Lys8) Antibody	2594	20 µl	11 kDa	Rabbit
Acetyl-Histone H4 (Lys12) (D2W6O) Rabbit mAb	13944	20 µl	11 kDa	Rabbit IgG
Histone H4 (L64C1) Mouse mAb	2935	20 µl	11 kDa	Mouse IgG1
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat
Anti-mouse IgG, HRP-linked Antibody	7076	100 µl		Horse

 Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Acetyl-Histone H4 Antibody Sampler Kit provides an economical means of detecting total histone H4 as well as histone H4 acetylated at various residues including Lys12, Lys5, and Lys8. The kit contains enough primary and secondary antibody to perform two western blots with each antibody.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Background

Modulation of chromatin structure plays an important role in the regulation of transcription in eukaryotes. The nucleosome, made up of DNA wound around eight core histone proteins (two each of H2A, H2B, H3, and H4), is the primary building block of chromatin (1). The amino-terminal tails of core histones undergo various posttranslational 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, 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, 23, 27, and 56. Acetylation of H3 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 at 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 at Thr3 of H3 in prophase and its dephosphorylation during anaphase (11).

Background References

1. Workman, J.L. and Kingston, R.E. (1998) *Annu Rev Biochem* 67, 545-79.
2. Hansen, J.C. et al. (1998) *Biochemistry* 37, 17637-41.
3. Strahl, B.D. and Allis, C.D. (2000) *Nature* 403, 41-5.
4. Cheung, P. et al. (2000) *Cell* 103, 263-71.
5. Bernstein, B.E. and Schreiber, S.L. (2002) *Chem Biol* 9, 1167-73.
6. Jaskelioff, M. and Peterson, C.L. (2003) *Nat Cell Biol* 5, 395-9.
7. Thorne, A.W. et al. (1990) *Eur J Biochem* 193, 701-13.
8. Hendzel, M.J. et al. (1997) *Chromosoma* 106, 348-60.
9. Goto, H. et al. (1999) *J Biol Chem* 274, 25543-9.
10. Preuss, U. et al. (2003) *Nucleic Acids Res* 31, 878-85.
11. Dai, J. et al. (2005) *Genes Dev* 19, 472-88.

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