

SP2143**Polyclonal Antibody to Histone H4 (acetyl K5) - Serum****Alternate names:**

H4/A, H4FA, HIST1H4

Quantity:

0.1 ml

Background:

Histone proteins H3, H4, H2A, and H2B function as building blocks to package eukaryotic DNA into repeating nucleosome units that are folded in higher order chromatin fibers. The nucleosome is composed of an octamer containing a H3/H4 tetramer and two H2A/H2B dimers, surrounded by approximately 146 base pairs of DNA. A diverse and elaborate array of post-translational modifications including acetylation, phosphorylation, methylation, ubiquitination, and ADP-ribosylation occurs on the N-terminal tail domains of histones.

Uniprot ID:[P62805](#)**NCBI:**[NP_001029249.1](#)**GeneID:**[121504](#)**Host / Isotype:**

Rabbit / IgG

Immunogen:

Ovalbumin-conjugated peptide.

AA Sequence:

NSGRGAcKGGKGLCC

Format:**State:** Liquid Serum containing 0.09% Sodium Azide as preservative.**Applications:****ELISA:** 1/1000.**Western Blot:** 1/600.**Immunofluorescence:** 1/400.**Immunoprecipitation.****Chromatin Immunoprecipitation (ChIP).**

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This antibody is specific for Histone H4 acetylated at Lysine 5.

Species: Drosophila, Yeast, Mammals, Plants, Amphibia.

Other species not tested.

Storage:

Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

General Readings:

1. Munks RJ, Moore J, O'Neill LP, Turner BM. Histone H4 acetylation in Drosophila. Frequency of acetylation at different sites defined by immunolabelling with site-specific antibodies. *FEBS Lett.* 1991 Jun 24;284(2):245-8. PubMed PMID: 2060643.
2. Turner BM, Birley AJ, Lavender J. Histone H4 isoforms acetylated at specific lysine residues define individual chromosomes and chromatin domains in Drosophila polytene nuclei. *Cell.* 1992 Apr 17;69(2):375-84. PubMed PMID: 1568251.
3. Belyaev N, Keohane AM, Turner BM. Differential underacetylation of histones H2A, H3 and H4 on the inactive X chromosome in human female cells. *Hum Genet.* 1996

May;97(5):573-8. PubMed PMID: 8655133.

4. Auger A, Galarneau L, Altaf M, Nourani A, Doyon Y, Utley RT, et al. Eaf1 is the platform for NuA4 molecular assembly that evolutionarily links chromatin acetylation to ATP-dependent exchange of histone H2A variants. *Mol Cell Biol.* 2008 Apr;28(7):2257-70. doi: 10.1128/MCB.01755-07. Epub 2008 Jan 22. PubMed PMID: 18212047.

5. Tsaprouni LG, Ito K, Powell JJ, Adcock IM, Punched N. Differential patterns of histone acetylation in inflammatory bowel diseases. *J Inflamm (Lond).* 2011 Jan 27;8(1):1. doi: 10.1186/1476-9255-8-1. PubMed PMID: 21272292.

6. Ito K, Barnes PJ, Adcock IM. Glucocorticoid receptor recruitment of histone deacetylase 2 inhibits interleukin-1beta-induced histone H4 acetylation on lysines 8 and 12. *Mol Cell Biol.* 2000 Sep;20(18):6891-903. PubMed PMID: 10958685.

7. Nie M, Pang L, Inoue H, Knox AJ. Transcriptional regulation of cyclooxygenase 2 by bradykinin and interleukin-1beta in human airway smooth muscle cells: involvement of different promoter elements, transcription factors, and histone h4 acetylation. *Mol Cell Biol.* 2003 Dec;23(24):9233-44. PubMed PMID: 14645533.

8. Nie M, Knox AJ, Pang L. beta2-Adrenoceptor agonists, like glucocorticoids, repress eotaxin gene transcription by selective inhibition of histone H4 acetylation. *J Immunol.* 2005 Jul 1;175(1):478-86. PubMed PMID: 15972682.

9. Tanny JC, Kirkpatrick DS, Gerber SA, Gygi SP, Moazed D. Budding yeast silencing complexes and regulation of Sir2 activity by protein-protein interactions. *Mol Cell Biol.* 2004 Aug;24(16):6931-46. PubMed PMID: 15282295.

10. Spada F, Chioda M, Thompson EM. Histone H4 post-translational modifications in chordate mitotic and endoreduplicative cell cycles. *J Cell Biochem.* 2005 Aug 1;95(5):885-901. PubMed PMID: 15937898.

11. Lacoste N, Utley RT, Hunter JM, Poirier GG, Côte J. Disruptor of telomeric silencing-1 is a chromatin-specific histone H3 methyltransferase. *J Biol Chem.* 2002 Aug 23;277(34):30421-4. Epub 2002 Jul 3. PubMed PMID: 12097318.