

Histone H3K14ac antibody (pAb)

Catalog Nos: 39599, 39616

RRID: AB_2793274

Isotype: Serum

Application(s): ChIP, ChIP-Seq, DB, IF, WB

Reactivity: Human, Mouse, Wide Range Predicted

Volumes: 100 μ l, 10 μ l

Purification: None

Host: Rabbit

Molecular Weight: 17 kDa

Background: 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). 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. Acetylation of histones is linked to a number of specific processes including transcriptional regulation and genomic organization.

Immunogen: This Histone H3 acetyl Lys14 antibody was raised against a peptide including acetyl-lysine 14 of histone H3.

Buffer: Rabbit serum containing 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic. For your convenience, an IgG version (Catalog No. 39697) of this antibody that was purified by Protein A Chromatography is also available.

Application Notes:

Applications Validated by Active Motif:

ChIP: 10 μ l per ChIP

ChIP-Seq: 10 μ l each

WB*: 1:500 - 1:2,000 dilution

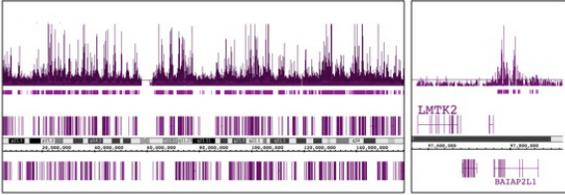
*Note: many chromatin-bound proteins are not soluble in a low salt nuclear extract and fractionate to the pellet. Therefore, we recommend a High Salt / Sonication Protocol when preparing nuclear extracts for Western blot.

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.

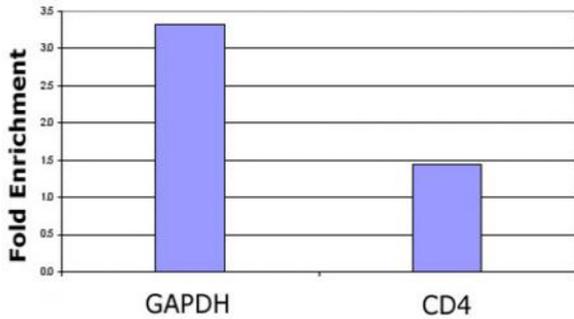
Histone H3K14ac antibody (pAb) tested by ChIP-chip.

ChIP was performed using the ChIP-IT[®] High Sensitivity Kit (Cat. No. 53040) with chromatin from a human B cell lymphoma cell line (3 million cells) and 10 µl of antibody. ChIP DNA was amplified by WGA, labeled and hybridized to a human tiling array. The image on the left shows H3K14Ac binding across the entire length of chromosome 7. The image on the right shows H3K14Ac binding at the BAIAP2L1 gene.



Histone H3 acetyl Lys14 antibody tested by ChIP analysis.

Chromatin IP performed using the ChIP-IT[®] Express Kit (Catalog No. 53008) and HeLa Chromatin (1.5 x 10⁶ cell equivalents per ChIP) using 10 µl of Histone H3 acetyl Lys14 antibody or the equivalent amount of rabbit IgG as a negative control. Real time, quantitative PCR (RT-qPCR) was performed on DNA purified from each of the ChIP reactions using a primer pair specific for the indicated gene. Data are presented as Fold Enrichment of the ChIP antibody signal versus the negative control IgG using the ddCT method.

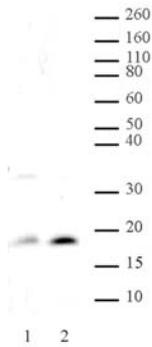


Histone H3 acetyl Lys14 antibody tested by Western blot.

HeLa acid extract (10 µg per lane) was probed with Histone H3 acetyl Lys14 antibody (1:1,000 dilution).

Lane 1: No treatment.

Lane 2: Cells treated with sodium butyrate.



Histone H3 acetyl Lys14 pAb tested by dot blot analysis.

Dot blot analysis was used to confirm the specificity of Histone H3 acetyl Lys14 pAb for acetyl Lys14 histone H3. Acetylated peptides corresponding to the immunogen and related peptides were spotted onto PVDF and probed with the antibody at a dilution of 1:5,000. The amount of peptide (picomoles) spotted is indicated next to each row.



Lane 1: Unmodified histone H3 Lys14 peptide. Lane 2: Acetyl-Lys14 peptide. Lane 3: Acetyl-Lys9 peptide. Lane 4: Acetyl-Lys18 peptide. Lane 5: Acetyl-Lys23 peptide. Lane 6: Acetyl-Lys27 peptide. Lane 7: Acetyl-Lys37 peptide. Lane 8: Acetyl-Lys36 peptide. Lane 9: Histone H2A acetyl-Lys5 peptide. Lane 10: Histone H2A acetyl-Lys9 peptide.