

Histone H3K79ac antibody (pAb)

Catalog Nos: 39565, 39566

RRID: AB_2793260

Isotype: IgG

Application(s): ChIP, DB, WB

Reactivity: Human, Wide Range Predicted

Volumes: 200 μ l, 10 μ l

Purification: Affinity Purified

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.

Lysine N- ϵ -acetylation is a dynamic, reversible and tightly regulated protein and histone modification that plays a major role in chromatin remodeling and in the regulation of gene expression in various cellular functions. Histone acetylation is often associated with transcriptional activation.

Immunogen: This Histone H3 acetyl Lys79 antibody was raised against a peptide containing acetyl-lysine 79 of human histone H3.

Buffer: Purified IgG in 70 mM Tris (pH 8), 105 mM NaCl, 31 mM glycine, 0.07 mM EDTA, 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

Application Notes:

Applications Validated by Active Motif:

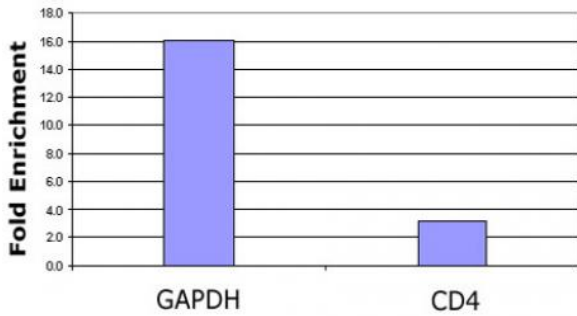
ChIP: 5 - 10 μ l per ChIP

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

DB: 1:5,000 dilution

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 H3 acetyl Lys79 pAb tested by ChIP analysis.

Chromatin IP performed using the ChIP-IT[®] Express Kit (Catalog No. 53008) and HeLa Chromatin (1.5×10^6 cell equivalents per ChIP) using 10 μ l of Histone H3 acetyl Lys79 pAb 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.

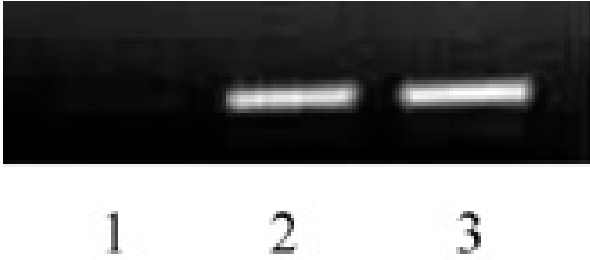
Histone H3 acetyl Lys79 pAb tested by ChIP.

Chromatin IP performed using the ChIP-IT[®] Express Kit (Catalog No. 53008) and 50 μ l of Ready-to-ChIP HeLa Chromatin (Catalog No. 53015) per ChIP. Subsequent to the ChIP reaction, DNA was purified from the immunoprecipitated chromatin and a region of the human GAPDH promoter was amplified by PCR.

Lane 1: ChIP using negative control rabbit IgG.

Lane 2: ChIP using 10 μ l of Histone H3 acetyl Lys79 pAb.

Lane 3: PCR input control.

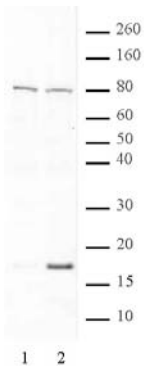


Histone H3 acetyl Lys79 pAb tested by Western blot.

HeLa acid extract (40 μ g per lane) was probed with Histone H3 acetyl Lys79 polyclonal antibody (1:1,000).

Lane 1: No treatment.

Lane 2: Cells treated with sodium butyrate. An unidentified band is also observed at 80 kDa.



Histone H3 acetyl Lys79 pAb tested by dot blot analysis.

Dot blot analysis was used to confirm the specificity of Histone H3 acetyl Lys79 pAb for acetyl Lys79 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 amino acids 75-83 of histone H3. Lane 2: Acetyl-Lys79 peptide. Lane 3: Acetyl-Lys14 peptide. Lane 4: Acetyl-Lys9 peptide. Lane 5: Acetyl-Lys18 peptide. Lane 6: Acetyl-Lys23 peptide. Lane 7: Acetyl-Lys27 peptide. Lane 8: Acetyl-Lys37 peptide. Lane 9: Acetyl-Lys36 peptide. Lane 10: Acetyl-Lys5 H2A peptide. Lane 11: Acetyl-Lys9 H2A peptide.