Histone H3ac (pan-acetyl) antibody (pAb)

Catalog Nos: 61637, 61937, 61638
RRID: AB_2793714
Isotype: IgG
Application(s): ChIP, DB, IF, WB
Reactivity: Human, Wide Range Predicted

Quantities: 100 µg, 50 µg, 10 µg
Purification: Protein A Chromatography
Host: Rabbit
Concentration: 1 µg/µl
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). Histone H1 is a linker histone, present at the interface between the nucleosome core and DNA entry/exit points; it is responsible for establishing higher-order chromatin structure. 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; they 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. Acetylation of histone H3 occurs at several different lysine positions in the histone tail, and is performed by Histone Acetyltransferases (HATs) such as CBP/p300. Acetylation of histones is often associated with transcriptional activation.

Immunogen: This antibody was raised against a peptide including acetyl-lysines contained in the N-terminal tail of human Histone H3.

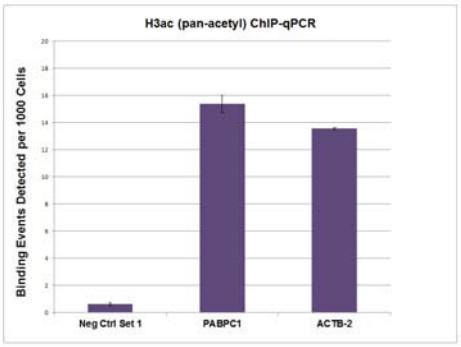
Buffer: Purified IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic. For your convenience, a sera version (Catalog No. 39139) of this antibody is also available.

Application Notes:
Applications Validated by Active Motif:
ChIP: 10 µg per ChIP
WB*: 0.2 - 1 µg/ml dilution
IF: 1:500 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.



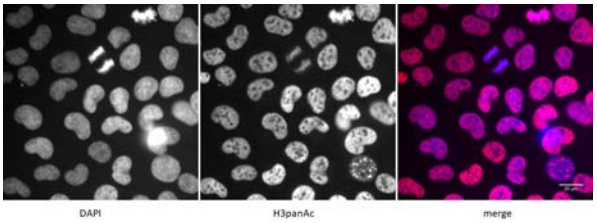
H3ac (pan-acetyl) antibody (pAb) tested by ChIP.
Chromatin immunoprecipitation (ChIP) was performed using the ChIP-IT® High Sensitivity Kit (Cat. No. 53040) with 13 µg of chromatin from both HeLa cells and 10 µg H3ac (pan-acetyl) antibody. ChIP DNA was used in qPCR with the gene-specific primer as indicated. Data are presented as Binding Events Detected per 1000 Cells using Active Motif's Epigenetic Services normalization scheme which accounts for primer efficiency and the amount of chromatin used in the ChIP reaction.

The file cannot be found:
61637-34519003-2.jpg

Histone H3ac (pan-acetyl) antibody (pAb) tested by Western blot.
Detection of acetylated Histone H3 by Western blot analysis using 20 µg HeLa nuclear extract and Histone H3ac (pan-acetyl) antibody at a 1 µg/ml dilution.
Lane 1: Nuclear extract of untreated HeLa cells.
Lane 2: Nuclear extract of HeLa cells treated with sodium butyrate.

The file cannot be found:
61637-34519003-3.jpg

Histone H3ac (pan-acetyl)antibody (pAb) tested by dot blot analysis.
Dot blot analysis was used to confirm the specificity of Histone H3ac antibody. Acetylated peptides corresponding to the immunogen and related peptides were spotted onto PVDF and probed with the antibody at a dilution of 1 µg/ml. The amount of peptide (picomoles) spotted is indicated next to the row.
Lane 1: H3K4ac peptide. Lane 2: unmodified H3K4 peptide. Lane 3: H3K9ac peptide. Lane 4: unmodified H3K9 peptide. Lane 5: H3K18ac peptide. Lane 6: unmodified H3K18 peptide. Lane 7: H3K23ac peptide. Lane 8: unmodified H3K23 peptide. Lane 9: H3K27ac peptide. Lane 10: unmodified H3K27 peptide.



Detection of H3panAc by immunofluorescence.
U2OS cells were stained with H3panAc antibody at a dilution of 1:500. Left panel: DAPI. Middle panel: Histone H3 pan-acetyl antibody staining. Right panel: merge.