Histone H3K36ac antibody (pAb)

Catalog Nos: 39379, 39380
RRID: AB_2614977
Application(s): ChIP, ChIP-Seq, DB, ICC, IF, WB
Reactivity: Human, Wide Range Predicted

Volumes: 100 µl, 10 µl
Purification: None
Host: Rabbit
Isotype: Serum
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.

Histone H3 Lys36 can also be mono-, di- or trimethylated. Methylation of Histone H3 Lys36 is associated with transcriptional repression.

Immunogen: This Histone H3 acetyl Lys36 antibody was raised against a peptide including acetyl-lysine 36 of histone H3.

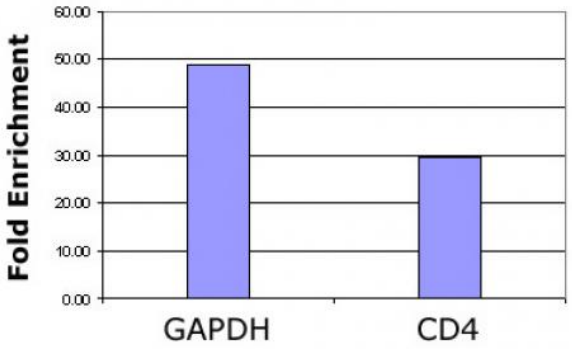
Buffer: Rabbit serum containing 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

Application Notes:
Applications Validated by Active Motif:
ChIP: 5 - 10 µl per ChIP
ICC/IF: 1:500 - 1:2,000 dilution
WB: 1:500 - 1:2,000 dilution

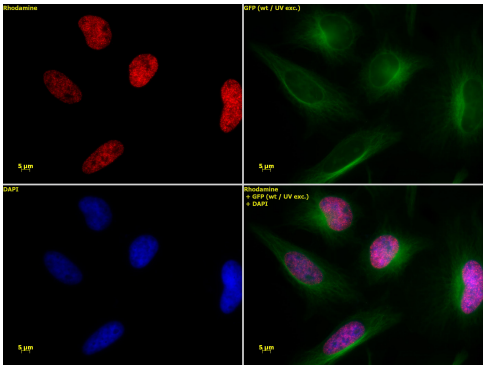
The modENCODE and NIH Roadmap Epigenomics Mapping Consortiums have implemented rigorous standardization criteria for all assays and reagents to be used. As part of this initiative, antibody specificity testing and the ability of the antibodies to work in ChIP-Seq were assessed in a large-scale study. This Histone H3 acetyl Lys36 antibody was validated for ChIP-Seq in the study (see reference).

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.

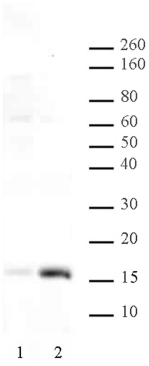
This product is for research use only and is not for use in diagnostic procedures.



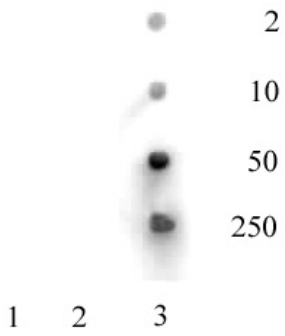
Histone H3 acetyl Lys36 antibody tested by ChIP analysis.
Chromatin IP performed using the ChIP-IT® Express Kit (Catalog No. 53008) and HeLa Chromatin (1.5 x 10^6 cell equivalents per ChIP) using 10 µl of Histone H3 acetyl Lys36 antibody or the equivalent amount of rabbit IgG as a negative control. Real 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 Lys36 antibody tested by immunofluorescence.
Top left: HeLa cells stained with Histone H3 acetyl Lys36 antibody (1:1,000). Top right: Same cells stained with alpha Tubulin mAb (Clone 5-B-1-2). Bottom left: Same cells stained with DAPI. Bottom right: Merge of all 3 images.



Histone H3 acetyl Lys36 antibody tested by Western blot.
HeLa acid extract (10 µg per lane) probed with Histone H3 acetyl Lys36 polyclonal antibody (1:2,000 dilution).
Lane 1: Untreated cells.
Lane 2: Cells treated with sodium butyrate.



Histone H3 acetyl Lys36 antibody tested by dot blot analysis.
Dot blot analysis was used to confirm the specificity of Histone H3 acetyl Lys36 antibody for acetyl Lys36 histone H3. Acetylated peptides corresponding to the immunogen and related peptides were spotted onto PVDF and probed with the antibody at 1:1,000. The amount of peptide (picomoles) spotted is indicated next to each row.
Lane 1: acetyl Lys37 peptide.
Lane 2: unmodified Lys36 peptide.
Lane 3: acetyl Lys36 peptide.

Not shown: Dot blot analysis was also performed against peptides acetylated at lysines 4, 9, 14, 18, 23 and 27 of histone H3 with no detection.