Histone H3K27ac antibody (pAb)

Catalog Nos: 39133, 39034, 39134
RRID: AB_2561016
Application(s): ChIP, ChIP-Seq, DB, ICC, IF, WB
Reactivity: Budding Yeast, Human, Wide Range Predicted

Quantities: 100 µg, 50 µg, 10 µg
Purification: Protein A Chromatography
Host: Rabbit
Isotype: IgG
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 27 of histone H3 can also be mono-, di- or trimethylated by different histone methyltransferases, such as EZH2 or NSD3. While histone methylation can be associated with transcriptional activation or repression, methylation of Lysine 27 of histone H3 is mainly associated with transcriptional repression.

Immunogen: This Histone H3 acetyl Lys27 antibody was raised against a peptide including acetyl-lysine 27 of histone H3.

Buffer: Purified IgG in 10 mM sodium phosphate (pH 7.5), 150 mM NaCl, 30% glycerol, 0.035% sodium azide. Sodium azide is highly toxic. For your convenience, an unpurified serum version (Catalog No. 39135) of this antibody is also available.

Application Notes:

Validated Applications:
ChIP: 5 µl per ChIP
ChIP-Seq: 5 µl each
ICC/IF: 1 - 5 µg/ml dilution
WB: 0.1 - 1 µg/ml dilution

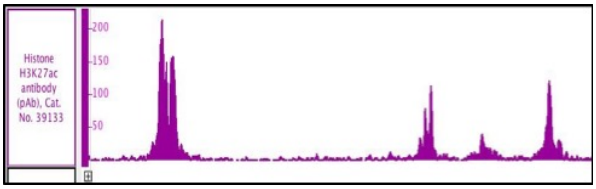
Note: For optimal results, we recommend a High Salt & Sonication Protocol when preparing nuclear extracts. www.activemotif.com to download the protocol.

modENCODE validation. This antibody was validated for ChIP-Seq in this study (see references).
NGS-QC® certification. This antibody has been processed by the NGS-QC® generator. For additional details, click here.

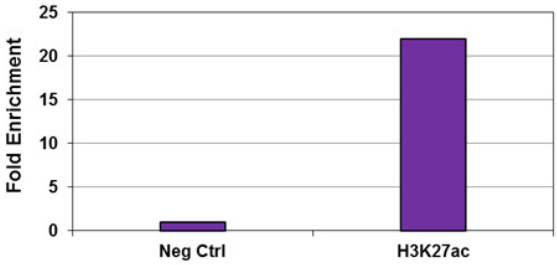
Published Applications:
ChIP-Seq
ChIP
WB
IF

Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Upon receipt, unconjugated antibodies may be stored at -20°C for up to 2 years. Fluorophore- & enzyme-conjugated antibodies should be stored at 4°C. Fluorophore-conjugated antibodies should be protected from light. Keep reagents on ice when not in storage; to avoid repeated freeze/thaw cycles, we recommend aliquoting items that will be stored frozen into single-use fractions prior to freezing. This product is guaranteed for 6 months from date of receipt.

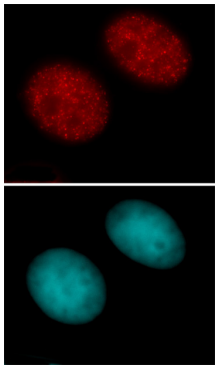
This product is for research use only and is not for use in diagnostic procedures.



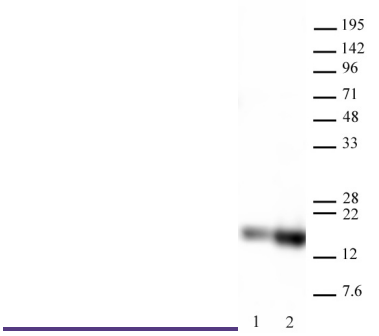
Histone H3K27ac antibody (pAb) tested by ChIP-Seq
Chromatin immunoprecipitation (ChIP) was performed using the ChIP-IT® High Sensitivity Kit (Cat. No. 53040) with 30 µg of HAP1 myeloid leukemia cell chromatin and 4 µg of Histone H3K27ac antibody. ChIP DNA was sequenced on the Illumina NextSeq and 17 million sequence tags were mapped to identify Histone H3K27ac binding sites on chromosome 2.



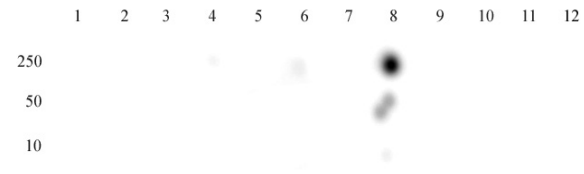
Histone H3 acetyl Lys27 antibody tested by ChIP qPCR analysis.
ChIP was performed using the ChIP-IT® High Sensitivity Kit (Cat. No. 53040) with chromatin from a human hepatocyte cell line. qPCR was performed using a negative control primer set (Untr20) and three positive control primer sets that amplify known H3K27Ac sites.



Histone H3 acetyl Lys27 antibody tested by immunofluorescence.
Staining of HEK293 cells with Histone H3 acetyl Lys27 antibody (1 µg/ml dilution, top panel) and DAPI (bottom panel).



Histone H3K27ac antibody tested by Western blot.
20 µg of Raji cell nuclear extract was probed with Histone H3K27ac polyclonal antibody at 1 µg/ml
Lane 1: No treatment.
Lane 2: Cells treated with sodium butyrate.



Histone H3K27ac antibody tested by dot blot analysis.
Dot blot analysis was used to confirm the specificity of Histone H3K27ac antibody. Acetylated peptides were spotted onto PVDF and probed with antibody at 0.5 µg/ml. The amount of peptide (picomoles) spotted is indicated on the left.
Column 1: H3K37ac. Column 2: Unmodified H3K37. Column 3: H3K36ac. Column 4: H3K9ac. Column 5: H3K14ac. Column 6: H3K18ac. Column 7: H3K23ac. Column 8: H3K27ac. Column 9: H4K5ac. Column 10: H4K8ac. Column 11: H4K12ac. Column 12: H4K16ac.