Histone H3K9ac antibody (mAb)

Catalog Nos: 61663, 61664
RRID: AB_2793725
Clone: 2G1F9
Isotype: IgG2a
Application(s): ChIP, ChIP-Seq, ICC, IF, WB
Reactivity: Human, Wide Range Predicted

Quantities: 100 µg, 10 µg
Purification: Protein G Chromatography
Host: Rat
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). 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 H3 Lys9 can also be mono-, di- or trimethylated. The methylation of this residue is often associated with transcriptional repression. However, acetylation of histone H3 Lys9 is associated with transcriptional activation of the genes.

Immunogen: This antibody was raised against a peptide containing acetyl-lysine 9 of human Histone H3.

Buffer: Purified IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

Application Notes:
Applications Validated by Active Motif:
ChIP: 5 - 10 µg per ChIP
ChIP-Seq: 5 - 10 µg each
ICC/IF: 1 - 2 µg/ml dilution
WB*: 0.5 - 2 µl/ml dilution

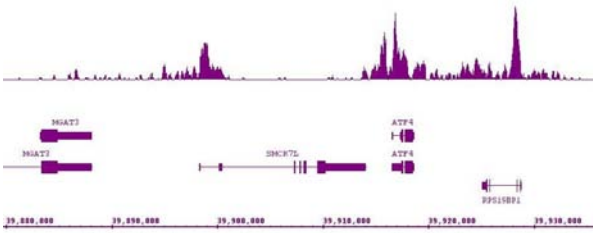
ChIP-Seq validation was performed by Active Motif's Epigenetics Services; the complete data set is available in the UCSC Genome Browser by clicking here.

*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.

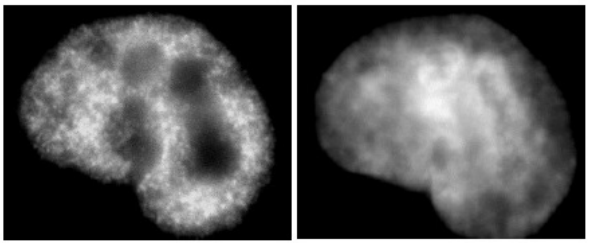
For Histone H3K9ac, we also offer AbFlex® Histone H3K9ac Recombinant Antibody (rAb). For details, see Catalog No. 91103.

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.

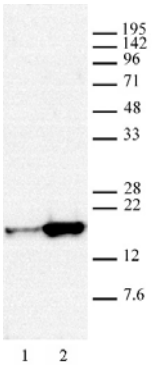
This product is for research use only and is not for use in diagnostic procedures.



Histone H3K9ac antibody (mAb) (Clone 2G1F9) tested by ChIP-Seq.
ChIP was performed using the ChIP-IT® High Sensitivity Kit (Cat. No. 53040) with 15 µg of chromatin from a human medulloblastoma cell line and 4 µg of antibody. ChIP DNA was sequenced on the Illumina HiSeq and 6 million sequence tags were mapped to identify Histone H3K9ac binding sites. The image shows binding across a region of chromosome 22. You can view the complete data set in the UCSC Genome Browser, starting at this specific location, here.



Histone H3K9ac antibody (mAb) (Clone 2G1F9) tested by immunofluorescence.
Left: HeLa cell stained with H3.1 / 3.2 antibody (mAb). Right: Hoechst.



Histone H3K9ac antibody (mAb) (Clone 2G1F9) tested by Western blot.
HeLa nuclear extract (20 µg per lane) probed with Histone H3K9ac antibody (mAb) (1 µg/ml). Lane 1: untreated cells. Lane 2: cells treated with sodium butyrate.