AbFlex® Histone H3K9ac antibody (rAb) (biotin)

Catalog Nos: 91101, 91102

RRID: AB_2793774
Isotype: IgG2a
Application(s): ChIP, ChIP-Seq, ELISA, ICC, IF, WB
Reactivity: Human, Wide Range Predicted

Quantities: 100 µg, 10 µg
Purification: Ni-NTA
Host: Mouse
Concentration: 1 µg/µl
Molecular Weight: 17 kDa

Background: AbFlex® antibodies are recombinant antibodies (rAbs) that have been generated using defined DNA sequences to produce highly specific, reproducible antibodies. Each AbFlex antibody contains a 6xHis-Tag, an avidin tag sequence for enzymatic biotin conjugation using the biotin ligase, BirA, and a sortase recognition motif (LPXTG) to attach a variety of labels directly to the antibody including fluorophores, enzymatic substrates (HRP, AP), peptides, drugs as well as solid supports.

AbFlex® Histone H3K9ac antibody (biotin) was expressed as full-length IgG with mouse immunoglobulin heavy and light chains (IgG2a isotype) in mammalian 293 cells. The antibody was directly labeled with biotin using the biotin ligase, BirA.

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.Acetylation of histone H3 Lys9 is associated with transcriptional activation of the genes.

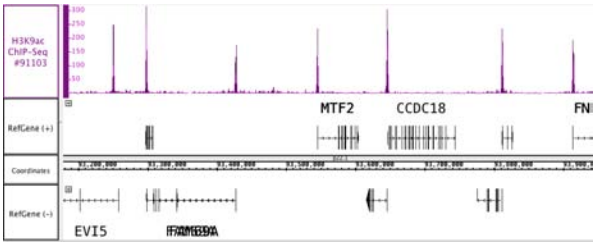
Immunogen: This antibody was raised against a peptide containing acetyl-lysine 9 of human Histone H3.

Buffer: Purified IgG in 50mM sodium phosphate pH 8.0, 150mM NaCl, and 100mM imidazole with 30% glycerol and 0.035% sodium azide.

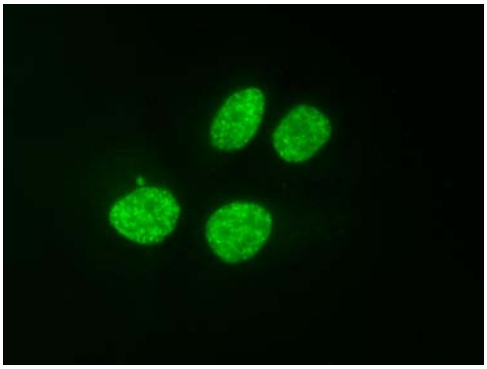
Application Notes:
Validated Applications:
ChIP-Seq: 4 µg each
ICC/IF: 1 - 2 µg / mL
WB: 0.2 - 2 µg/mL
Bead-based ELISA: 1.5 - 40 µg/ml

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.

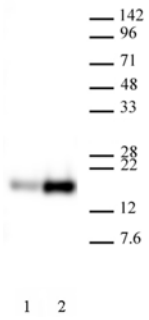
This product is for research use only and is not for use in diagnostic procedures.



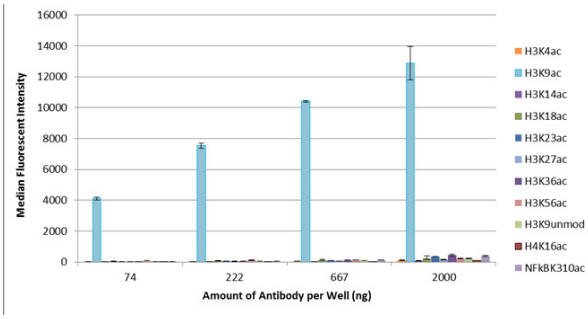
AbFlex® Histone H3K9ac antibody (rAb) tested by ChIP-Seq.
ChIP was performed using the ChIP-IT® High Sensitivity Kit (Cat. No. 53040) with 30 µg of chromatin from PC9 cell line and 4 µg of antibody. ChIP DNA was sequenced on the Illumina HiSeq and 22 million sequence tags were mapped to identify Histone H3K9ac binding sites. The image shows binding across a region of chromosome 1.



AbFlex® Histone H3K9ac antibody (rAb) tested by immunofluorescence.
HeLa cell stained with 2µg /mL of AbFlex® Histone H3K9ac antibody (rAb) followed by anti-mouse-IgG-488.



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



AbFlex® Histone H3K9ac antibody (rAb) tested by Luminex bead-based specificity analysis.
Luminex bead-based specificity analysis was used to confirm the specificity of AbFlex® Histone H3K9ac antibody (rAb) antibody for acetyl-lysine 9 H3. Peptides corresponding to regions around major sites of histone H3 acetylation or other acetyl-lysine peptides were conjugated to MagPlex Luminex beads and incubated with various amounts of AbFlex® Histone H3K9ac antibody (rAb). Peptide-bound antibody was detected with anti-mouse IgG-Phycoerythrin and read in a Luminex instrument.

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