

Datasheet for ABIN6972014

anti-Histone 3 antibody (acLys9)

5 Images

1 Publication



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Overview

Quantity:	100 µg
Target:	Histone 3 (H3)
Binding Specificity:	acLys9
Reactivity:	Human, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Histone 3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Chromatin Immunoprecipitation (ChIP), Dot Blot (DB), ChIP DNA-Sequencing (ChIP-seq), Immunocytochemistry (ICC), Cleavage Under Targets and Tagmentation (CUT&Tag)

Product Details

Immunogen:	This Histone H3 acetyl Lys9 antibody was raised against a peptide including acetyl-lysine 9 of histone H3.
Isotype:	IgG
Characteristics:	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

Product Details

modifications play a major role in regulating gene expression. Lysine N-e-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. Histone H3K9ac antibody (pAb) was raised in a Rabbit host. It has been validated for use in Chromatin Immunoprecipitation, ChIP-Seq, CUT&Tag, Dot blot, Immunocytochemistry, Immunofluorescence and Western blot, it has been shown to react with Human and Mouse samples, but it is predicted that it will react with a wide range of sample types.

Purification: Protein A Chromatography

Target Details

Target: Histone 3 (H3)

Alternative Name: Histone H3 ([H3 Products](#))

Molecular Weight: 17 kDa

NCBI Accession: [NP_003522](#)

Application Details

Application Notes: Recommended antibody dilutions for different applications:
ChIP: 10 µg per ChIP
ChIP-Seq: 3 µg each
ICC/IF: 2 µg/ml dilution
WB: 0.5 - 2 µg/ml dilution
CUT&Tag: 1 µg per 50 µl reaction
Optimal working dilution should be determined by the investigator.

Restrictions: For Research Use only

Handling

Concentration: 1 µg/µL

Buffer: Purified IgG in PBS (pH 7.5) with 30 % glycerol and 0.035 % sodium azide.

Preservative: Sodium azide

Handling

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

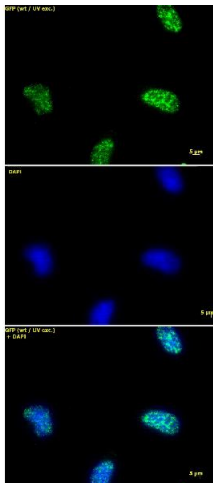
Storage: -20 °C

Storage Comment: 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.

Publications

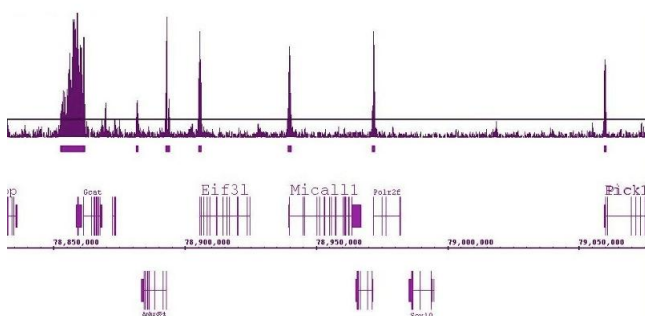
Product cited in: Kee, Thudium, Renner, Glastad, Palozola, Zhang, Li, Lan, Cesare, Poleshko, Kiseleva, Truitt, Cardenas-Diaz, Zhang, Xie, Kotton, Alysandratos, Epstein, Shi et al.: "SARS-CoV-2 disrupts host epigenetic regulation via histone mimicry." in: **Nature**, (2022) ([PubMed](#)).

Images



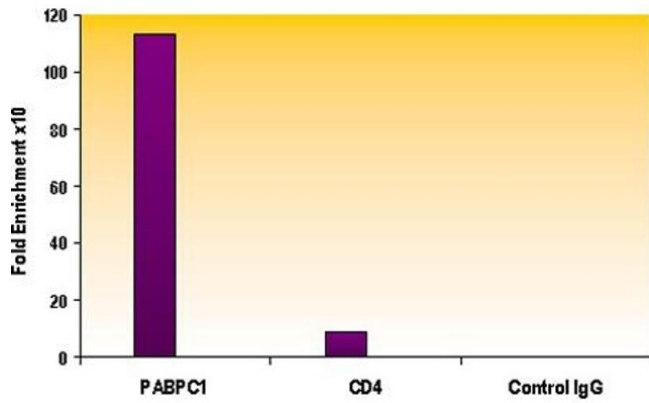
Immunofluorescence

Image 1. Immunofluorescence stain of Histone H3K9ac antibody (pAb). HeLa cells stained at 2 µg/mL with Histone H3 acetyl Lys9 antibody. Top panel: Histone H3 acetyl Lys9 antibody. Middle panel: DAPI. Bottom panel: merge.



ChIP DNA-Sequencing

Image 2. Histone H3K9ac antibody (pAb) tested by ChIP-Seq. ChIP was performed using the ChIP-IT High Sensitivity Kit with 30 µg of chromatin from mouse liver. ChIP DNA was sequenced on the Illumina GA II and 25 million sequence tags were mapped to identify H3K9Ac binding across the genome. The image shows a 1.5 million base pair region on chromosome 15. H3K9Ac shows promoter localization at many genes and broader binding near the Gcat gene.



Chromatin Immunoprecipitation

Image 3. ChIP of Histone H3K9ac antibody (pAb) Chromatin IP performed using the ChIP-IT Express Kit and HeLa Chromatin (1.5×10^6 cell equivalents per ChIP) using $3 \mu\text{g}$ of Histone H3 acetyl Lys9 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.

Please check the [product details page](#) for more images. Overall 5 images are available for ABIN6972014.