

Histone H3K4me3 antibody (mAb)

Catalog Nos: 61379, 61979

RRID: AB_2793611

Clone: MABI 0304

Isotype: IgG1

Application(s): ChIP, ChIP-Seq, ICC, IF, WB

Reactivity: Human, Wide Range Predicted

Quantities: 100 µg, 50 µg

Purification: Protein G Chromatography

Host: Mouse

Concentration: 1.0 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). Histone H1 is a linker histone, present at the interface between the nucleosome core and DNA entry/exit points. Histone H1 is responsible for establishing higher-order chromatin structure. 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.

Histone methylation can be associated with transcriptional activation or repression, depending on the methylated residue. Lysine 4 of histone H3 can be mono-, di- or trimethylated by different histone methyltransferases (HMTs) such as SET1 or ASH1. Methylation of Lys4 is often associated with transcriptional activation. The demethylase LSD1 is able to demethylate histone H3 Lys4.

Immunogen: This Histone H3 trimethyl Lys4 antibody was raised against a synthetic peptide containing trimethyl Lys4 of human histone H3.

Buffer: PBS pH 7.5 containing 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

WB: 2 - 10 µg/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](#).

NGS-QC[®] certification: this antibody has been processed by the NGS-QC[®] generator. For additional details, click [here](#).

For Histone H3K4me3, we also offer AbFlex[®] Histone H3K4me3 Recombinant Antibody (rAb). For details, see Catalog No. 91263.

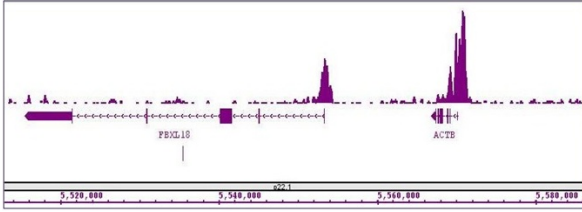
Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

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

This antibody is manufactured by MAB Institute, Inc.

Histone H3K4me3 antibody (mAb) tested by ChIP-Seq.

ChIP was performed using the ChIP-IT[®] High Sensitivity Kit (Cat. No. 53040) with 15 ug 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 H3K4me3 binding sites. The image shows binding across a region of chromosome 7. You can view the complete data set in the UCSC Genome Browser, starting at this specific location, [here](#).



Histone H3 trimethyl Lys4 antibody tested by Western blot.

HeLa acid extract (20 µg) probed with Histone H3K4me3 antibody (10 µg/ml dilution).

