

## Histone H3 antibody (mAb)

**Catalog Nos:** 39763, 39064

**RRID:** AB\_2650522

**Clone:** MABI 0301

**Isotype:** IgG2b

**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.

Each histone contains two domains. First, a main globular domain (C-terminal) forming the core of the nucleosome is involved in histone-histone interactions and in binding to the DNA. Secondly, an N-terminal tail is subject to post-translational modifications. 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.

**Immunogen:** This Histone H3 antibody (mAb) was raised against a peptide containing the N-terminus of 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-Seq: 4 µg per ChIP

ChIP: 5 - 10 µg per ChIP

ICC/IF: 1 µg/ml dilution

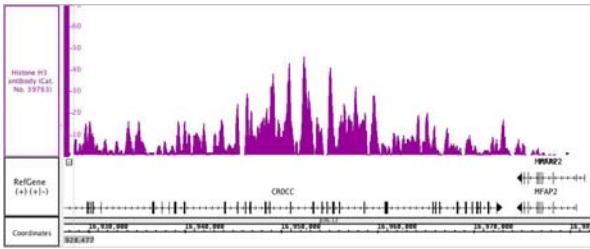
WB: 0.5 - 2 µg/ml dilution

For Histone H3, we also offer AbFlex® Histone H3 Recombinant Antibody (rAb). For details, see Catalog No. 91297.

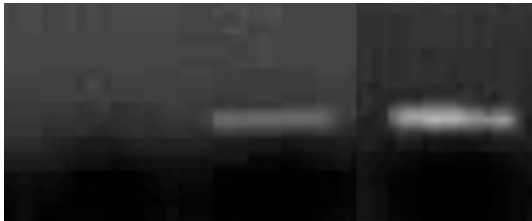
**Storage and Guarantee:** Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This 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 H3 antibody (mAb) tested by ChIP-Seq.**Chromatin immunoprecipitation (ChIP) was performed using the ChIP-IT<sup>®</sup> High Sensitivity Kit (Cat. No. 53040) with 30 µg of chromatin from Farage human lymph-node derived B cells and 4 µg Histone H3 antibody. ChIP DNA was sequenced on the Illumina HiSeq and 17.7 million sequence tags were mapped to identify Histone H3 binding sites.



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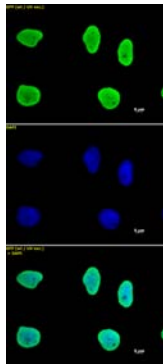
**Histone H3 antibody (mAb) tested by ChIP.**

ChIP performed on Active Motif Ready-to-ChIP HeLa cell chromatin (Catalog No. 53015) using Histone H3 antibody (mAb). PCR was performed using primers specific for the promoter region of the human GAPDH gene.

Lane 1: ChIP using mouse IgG as a negative control.

Lane 2: ChIP using 10 µg of Histone H3 antibody (mAb).

Lane 3: Input DNA control.



**Histone H3 antibody (mAb) tested by immunofluorescence.**

HeLa cells stained with Histone H3 antibody (mAb) at a dilution of 1 µg/ml.



**Histone H3 antibody (mAb) tested by Western blot.**

HeLa nuclear extract (20 µg per lane) probed with Histone H3 antibody (mab) at a dilution of 2 µg/ml.

Lane 1: Nuclear extract of untreated HeLa cells.

Lane 2: Nuclear extract of HeLa cells treated with sodium butyrate.