Histone H3K9me3 antibody (mAb)

Catalog Nos: 61013, 61014
RRID: AB_2687870
Clone: MABI 0319
Isotype: IgG2b
Application(s): ChIP, DB, ICC, IF, WB
Reactivity: Human, Wide Range Predicted

Quantities: 100 µg, 50 µg
Purification: Protein G Chromatography
Host: Mouse
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). 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.

The methylation of histones can occur on two different residues: arginine or lysine. Histone methylation can be associated with transcriptional activation or repression, depending on the methylated residue. Lysine 9 of histone H3 can be mono-, di- or trimethylated by different histone methyltransferases (HMTs) such as SuvH39H1 or G9a. This methylated lysine can be demethylated by histone demethylases as JMJD1A, LSD1 or JMJD2C. Methylation of this residue is mainly associated with transcriptional repression.

Immunogen: This Histone H3 trimethyl Lys9 antibody was raised against a peptide containing trimethyl Lys9 of human Histone H3.

Buffer: PBS pH 7.5 containing 30% glycerol, 0.3 M NaCl, and 0.035% sodium azide. Sodium azide is highly toxic.

Application Notes:
Applications Validated by Active Motif:
ChIP: 2 - 10 µg per ChIP
WB: 0.5 - 2 µg/ml dilution

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 trimethyl Lys9 antibody tested by ChIP.
Chromatin IP performed using the ChIP-IT® Express Kit (Catalog No. 53008) and HeLa Chromatin (1.5 x 10^6 cell equivalents per ChIP) using 10 µg of Histone H3 trimethyl Lys9 pAb or the equivalent amount of rabbit IgG. RT-qPCR was performed on DNA purified from each of the ChIP DNA using a primer pair for the SAT2 alpha gene. Data are presented as Fold Enrichment of the antibody signal versus the negative control IgG using the ddCT method.

Western blot of Histone H3 trimethyl Lys9 antibody.
HeLa nuclear extract (20 µg per lane) probed with Histone H3 trimethyl Lys9 antibody (2 µg/ml dilution).

Histone H3 trimethyl Lys9 antibody tested by dot blot analysis.
Dot blot analysis was used to confirm the specificity of Histone H3 trimethyl Lys9 antibody for trimethyl Lys9 of histone H3. Recombinant methylated histone proteins corresponding to the immunogen and related sequences were spotted onto PVDF and probed with Histone H3 trimethyl Lys9 at 2 µg/ml. The amount of protein (picomoles) spotted is indicated next to each row. Lane 1: unmodified H3 protein. Lane 2: monomethyl Lys4 protein. Lane 3: dimethyl Lys4 protein. Lane 4: trimethyl Lys4 protein. Lane 5: monomethyl Lys9 protein. Lane 6: dimethyl Lys9 protein. Lane 7: trimethyl Lys9 protein. Lane 8: monomethyl Lys27 protein. Lane 9: dimethyl Lys27 protein. Lane 10: trimethyl Lys27 protein.