Histone H3K9me1me2me3 antibody (pAb)

Catalog Nos: 39241, 39242
RRID: AB_2793200
Isotype: Serum
Application(s): DB, ICC, IF, WB
Reactivity: Human, Wide Range Predicted

Volumes: 200 µl, 10 µl
Purification: None
Host: Rabbit
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.

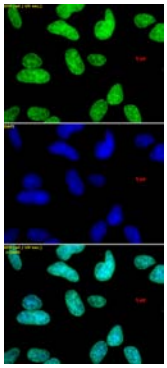
Immunogen: This Histone H3 pan-methyl Lys9 antibody was raised against a peptide including methyl-lysine 9 of histone H3.

Buffer: Rabbit serum containing 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

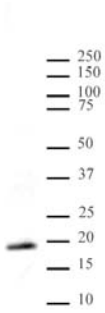
Application Notes:
Applications Validated by Active Motif:
ICC/IF: 1:250 - 1:2,000 dilution

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.

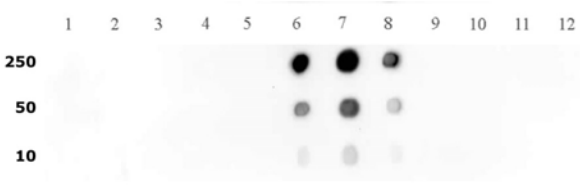
This product is for research use only and is not for use in diagnostic procedures.



Histone H3 pan-methyl Lys9 antibody tested by immunofluorescence.
Staining of HeLa cells with Histone H3 pan-methyl Lys9 antibody (1:1,000 dilution, top panel) and DAPI (middle panel), and a merge of both images (bottom panel).



Histone H3 pan-methyl Lys9 antibody tested by Western blot.
Detection of Histone H3 dimethyl Lys9 by Western blot. The analysis was performed using 10 µg HeLa acid extract and Histone H3 pan-methyl Lys9 antibody at a 1:1,000 dilution.



Histone H3 pan-methyl Lys9 antibody tested by dot blot analysis.
Dot blot analysis was used to confirm the specificity of Histone H3 pan-methyl Lys9 for methyl-lysine 9 of histone H3. Decreasing amounts of peptides corresponding to regions around major sites of histone H3 methylation (lysine 4, lysine 9, lysine 27) were spotted onto PVDF and probed with Histone H3 pan-methyl Lys9 antibody at a dilution of 1:5,000.
Lane 1: Unmodified Lys4 peptide. Lane 2: Monomethyl Lys4 peptide. Lane 3: Dimethyl Lys4 peptide. Lane 4: Trimethyl Lys4 peptide. Lane 5: Unmodified Lys9 peptide. Lane 6: Monomethyl Lys9 peptide. Lane 7: Dimethyl Lys9 peptide. Lane 8: Trimethyl Lys9 peptide. Lane 9: Unmodified Lys27 peptide. Lane 10: Monomethyl Lys27 peptide. Lane 11: Dimethyl Lys27 peptide. Lane 12: Trimethyl Lys27 peptide.