Histone H3K27me2me3 antibody (mAb)

Catalog Nos: 39536, 39538
RRID: AB_2793247
Clone: 7B11
Isotype: IgG
Application(s): ChIP, ICC, IF, WB
Reactivity: Human, Wide Range Predicted

Quantities: 100 µg, 10 µg
Purification: Protein A 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; it 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; they play a major role in regulating gene expression.

Histone H3K27 can be mono-, di- or trimethylated by different histone methyltransferases, such as EZH2 or NSD3. While histone methylation can be associated with transcriptional activation or repression, methylation of Lysine 27 of histone H3 is mainly associated with transcriptional repression.

Immunogen: This Histone H3 di/trimethyl Lys27 antibody was raised against a peptide including trimethyl-lysine 27 of histone H3.

Buffer: Purified IgG in 10 mM sodium phosphate (pH 7.5), 150 mM NaCl, 30% glycerol, 0.035% sodium azide. Sodium azide is highly toxic. For your convenience, an ascites version (Catalog No. 39535) of this antibody is also available.

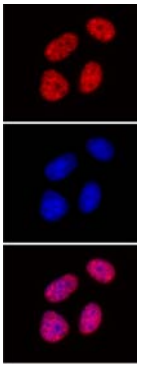
Application Notes:
Applications Validated by Active Motif:
ICC/IF: 0.5 - 2 µg/ml dilution
WB*: 0.5 - 2 µg/ml dilution

*Note: many chromatin-bound proteins are not soluble in a low salt nuclear extract and fractionate to the pellet. Therefore, we recommend a High Salt / Sonication Protocol when preparing nuclear extracts for Western Blot.

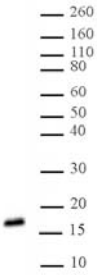
This antibody has been published for use in ChIP, but has not been validated by Active Motif for this application. ChIP-validated antibodies are available for this target: Catalog No. 39535.

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.

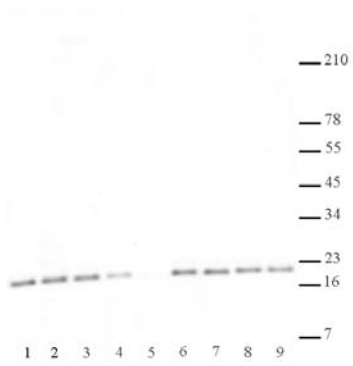
This product is for research use only and is not for use in diagnostic procedures.



Histone H3 di/trimethyl Lys27 antibody (mAb) tested by immunofluorescence.
Top: HeLa cells stained with Histone H3 di/trimethyl Lys27 antibody (mAb) at 1:500 dilution (red). Middle: Same cells stained with DAPI (blue). Bottom: Both images merged. Staining was carried out using MAX Stain™ Immunofluorescence Tools.



Histone H3 di/trimethyl Lys27 antibody (mAb) tested by Western blot.
HeLa acid extract (10 µg) probed with Histone H3 di/trimethyl Lys27 antibody (mAb) (1:500).



Histone H3 di/trimethyl Lys27 antibody (mAb) specificity data.
HeLa acid extract (10 µg per lane) probed with Histone H3 di/trimethyl Lys27 antibody (mAb) (1:500) with or without pre-incubation of antibody with 1 µM peptide containing the sequence surrounding either Lys9 or Lys27 of Histone H3.
Lane 1: no peptide Lane 2: unmodified Lys27 Lane 3: monomethyl-Lys27 Lane 4: dimethyl Lys27 Lane 5: trimethyl-Lys27 Lane 6: unmodified Lys9 Lane 7: monomethyl-Lys9 Lane 8: dimethyl-Lys9 Lane 9: trimethyl-Lys9.