
Histone H3K9me2 (H3K9 Dimethyl) Polyclonal Antibody

(Catalog # A-4035)

Background

Modulation of chromatin structure plays an important role in the regulation of transcription in eukaryotes. The nucleosome, made up of DNA wound around eight core histone proteins (two each of H2A, H2B, H3, and H4), is the primary building block of chromatin. The amino-terminal tails of core histones undergo various post-translational modifications, including acetylation, phosphorylation, methylation, and ubiquitination. These modifications occur in response to various stimuli and have a direct effect on the accessibility of chromatin to transcription factors and, therefore, gene expression. In most species, histone H2B is primarily acetylated at Lys5, 12, 15, and 20. Histone H3 is primarily acetylated at Lys9, 14, 18, 23, 27, and 56. Acetylation of H3 at Lys9 appears to have a dominant role in histone deposition and chromatin assembly in some organisms. Phosphorylation at Ser10, Ser28, and Thr11 of histone H3 is tightly correlated with chromosome condensation during both mitosis and meiosis. Phosphorylation at Thr3 of histone H3 is highly conserved among many species and is catalyzed by the kinase haspin. Immunostaining with phospho-specific antibodies in mammalian cells reveals mitotic phosphorylation at Thr3 of H3 in prophase and its dephosphorylation during anaphase.

Description

Histone H3K9me2 (H3K9 Dimethyl) Polyclonal Antibody. Unconjugated. Raised in: Rabbit.

Formulation

Buffer: PBS with 0.05% proclin300, 50% glycerol, pH7.3.

Specificity

Broad Range, Mouse, Rat, Human

Isotype

IgG

Uniprot ID

Q16695/P68431

Purification

Affinity Purified

Immunogen

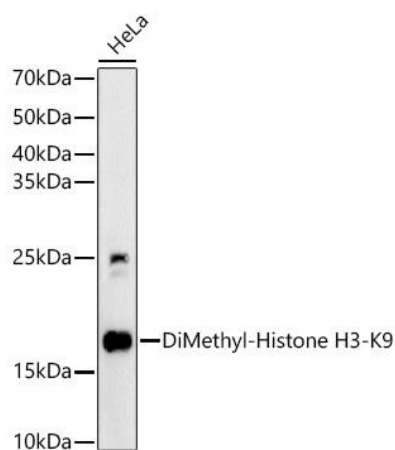
A synthetic peptide corresponding to a sequence within amino acids 1-100 of human histone H3 (NP_003520.1).

Storage

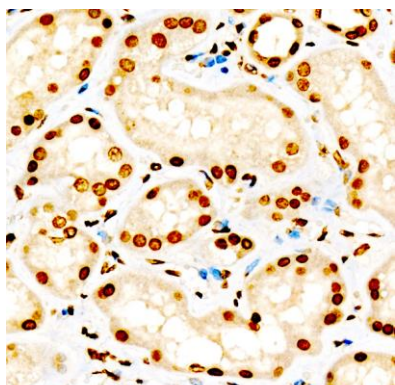
Shipped at 4°C. Store at -20°C. Avoid multiple freeze/thaw cycles.

Application

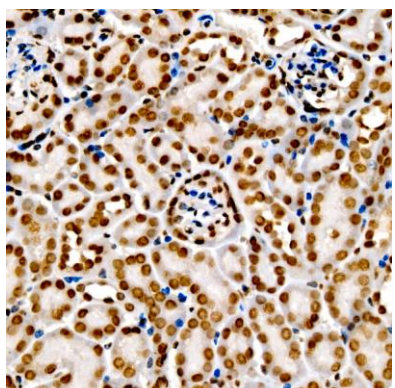
WB, IHC, IF/ICC, ChIP, ChIPseq, DB, ELISA; Recommended dilution: WB 1:500 - 1:1000, IHC 1:50 - 1:200, IF/ICC 1:50 - 1:200, ChIP 5µg antibody for 5µg-10µg of Chromatin, ChIP-seq 1:50 - 1:200, DB 1:500 - 1:2000, ELISA - recommended starting concentration is 1 µg/mL. Please optimize the concentration based on your specific assay requirements.



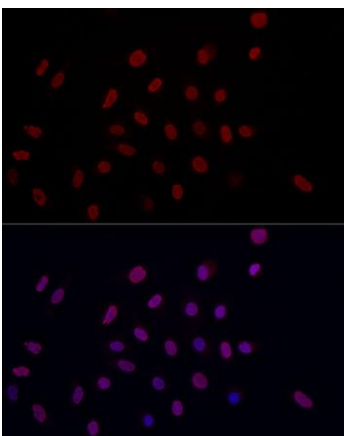
WB analysis of HeLa, using Histone H3K9me2 (H3K9 Dimethyl) Polyclonal Antibody at 1:600 dilution. Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) at 1:10000 dilution. Lysates/proteins: 25ug per lane. Blocking buffer: 3% nonfat dry milk in TBST. Exposure time: 60s.



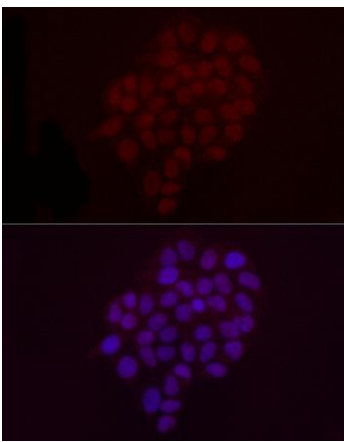
Immunohistochemistry analysis of paraffin-embedded Human kidney using Histone H3K9me2 (H3K9 Dimethyl) Polyclonal Antibody at dilution of 1:20 (40x lens). High pressure antigen retrieval performed with 0.01M Citrate Bufferr (pH 6.0) prior to IHC staining.



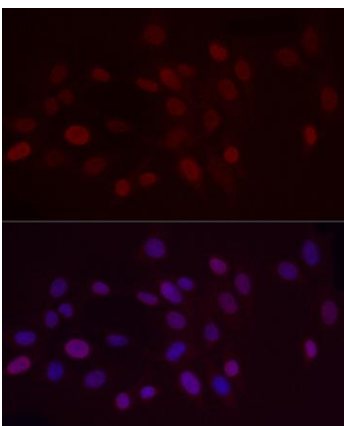
Immunohistochemistry analysis of paraffin-embedded Mouse kidney using Histone H3K9me2 (H3K9 Dimethyl) Polyclonal Antibody at dilution of 1:20 (40x lens). High pressure antigen retrieval performed with 0.01M Citrate Bufferr (pH 6.0) prior to IHC staining.



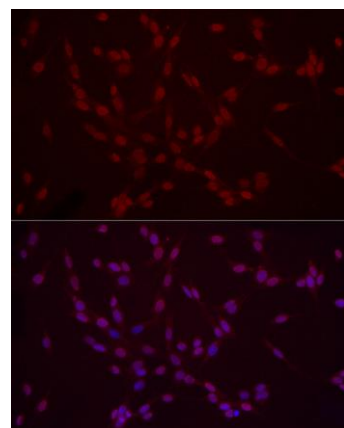
Immunofluorescence analysis of A-549 cells using Histone H3K9me2 (H3K9 Dimethyl) Polyclonal Antibody at dilution of 1:50 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) at 1:500 dilution. Blue: DAPI for nuclear staining.



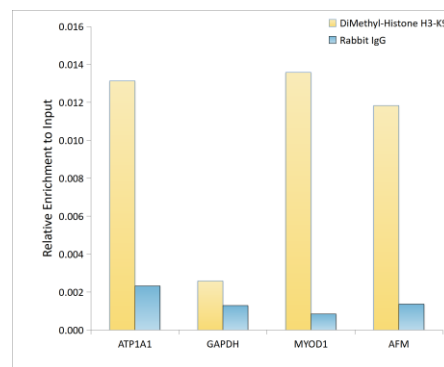
Immunofluorescence analysis of HeLa cells using Histone H3K9me2 (H3K9 Dimethyl) Polyclonal Antibody at dilution of 1:50 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) at 1:500 dilution. Blue: DAPI for nuclear staining.



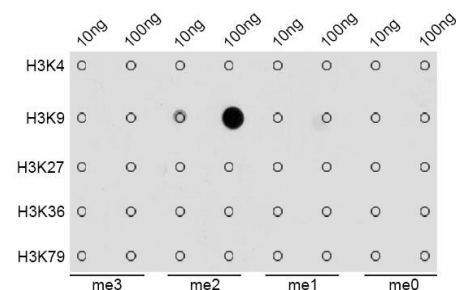
Immunofluorescence analysis of NIH/3T3 cells using Histone H3K9me2 (H3K9 Dimethyl) Polyclonal Antibody at dilution of 1:50 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) at 1:500 dilution. Blue: DAPI for nuclear staining.



Immunofluorescence analysis of PC-12 cells using Histone H3K9me2 (H3K9 Dimethyl) Polyclonal Antibody at dilution of 1:50 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) at 1:500 dilution. Blue: DAPI for nuclear staining.



Chromatin immunoprecipitation analysis of extracts of HeLa cells, using Histone H3K9me2 (H3K9 Dimethyl) Polyclonal Antibody and rabbit IgG. The amount of immunoprecipitated DNA was checked by quantitative PCR. Histogram was constructed by the ratios of the immunoprecipitated DNA to the input.



Dot-blot analysis of all sorts of methylation peptides using Histone H3K9me2 (H3K9 Dimethyl) Polyclonal Antibody.