

Histone H3R2 Dimethyl Symmetric (H3R2me2s) Polyclonal Antibody

(Catalog # A-3705)

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 H3R2 Dimethyl Symmetric (H3R2me2s) Polyclonal Antibody. Unconjugated. Raised in: Rabbit.

Formulation

Buffer: PBS with 0.09% Sodium azide, 50% glycerol, pH7.3.

Specificity

Human, Mouse, Rat, Broad Range

Isotype

IgG

Uniprot ID

Q16695/P68431

Purification

Affinity Purified

Immunogen

A synthetic symmetric dimethylated peptide around R2 of human histone H3 (NP_003520.1).

Storage

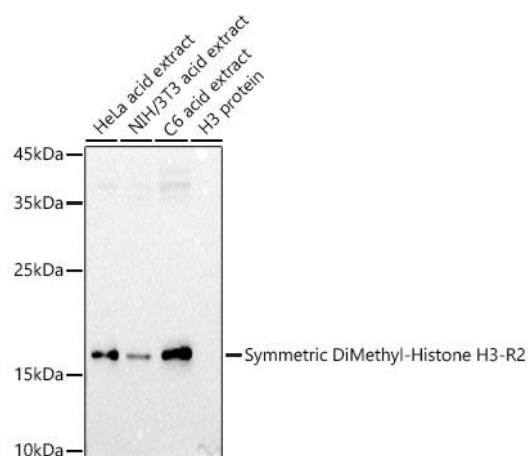
Shipped at 4°C. Store at -20°C. Avoid multiple freeze/thaw cycles.

Alternative Names

H3R2me2s, HIST1H3J, H3/j, H3FJ, Histone H3.1, Histone H3/a, Histone H3/b, Histone H3/c, Histone H3/d, Histone H3/f, Histone H3/h, Histone H3/l, Histone H3/j, Histone H3/k, Histone H3/l, HIST3H3, H3 Arginine 2 me2s

Application

WB, IHC, IF/ICC, ChIPseq, ELISA; Recommended dilution: WB 1:500 - 1:1000, IHC 1:50 - 1:200, IF/ICC 1:50 - 1:200, ChIPseq 1:20 - 1:100, ELISA - Recommended starting concentration is 1 µg/mL. Please optimize the concentration based on your specific assay requirements.

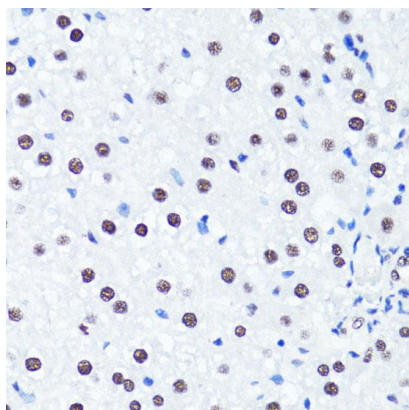


Western blot analysis of extracts of various cell lines, using H3R2me2s Polyclonal Antibody at 1:1000 dilution. Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) at 1:10000 dilution. Lysates/proteins: 25ug per lane. Blocking buffer: 3% nonfat dry milk in TBST. Exposure time: 60s.

	H3R2		H3K4		H3R8		H3K9		H3R17		H3R26	
	10ng	50ng	10ng	50ng	10ng	50ng	10ng	50ng	10ng	50ng	10ng	50ng
me0	○	○	○	○	○	○	○	○	○	○	○	○
me1	○	○	○	○	○	○	○	○	○	○	○	○
me2/me2a	○	○	○	○	○	○	○	○	○	○	○	○
me3/me2s	○	●	○	○	○	○	○	○	○	○	○	○

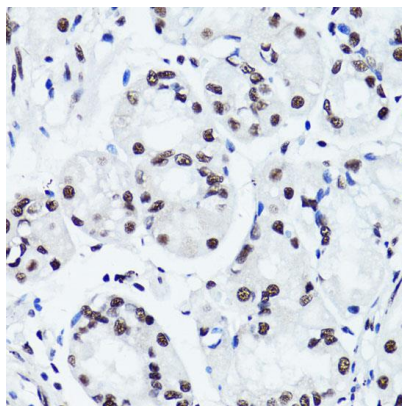
	H3K27		H3K36		H3K56		H3K79		H4R3		H4K20	
	10ng	50ng	10ng	50ng	10ng	50ng	10ng	50ng	10ng	50ng	10ng	50ng
me0	○	○	○	○	○	○	○	○	○	○	○	○
me1	○	○	○	○	○	○	○	○	○	○	○	○
me2/me2a	○	○	○	○	○	○	○	○	○	○	○	○
me3/me2s	○	○	○	○	○	○	○	○	○	○	○	○

Dot-blot analysis of all sorts of methylation peptides using H3R2me2s Polyclonal Antibody.

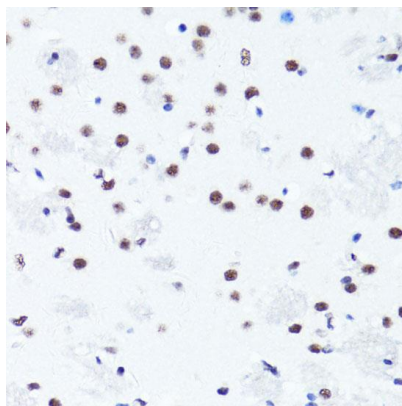


Immunohistochemistry of paraffin-embedded rat liver using H3R2me2s Polyclonal Antibody at dilution of 1:100 (40x lens). Microwave antigen retrieval performed with 0.01M PBS Buffer (pH 7.2) prior to IHC staining.

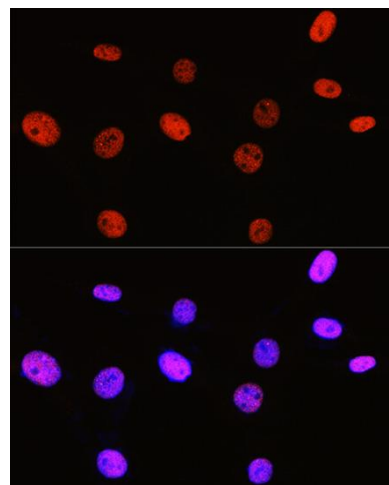
dilution of 1:100 (40x lens). Microwave antigen retrieval performed with 0.01M PBS Buffer (pH 7.2) prior to IHC staining.



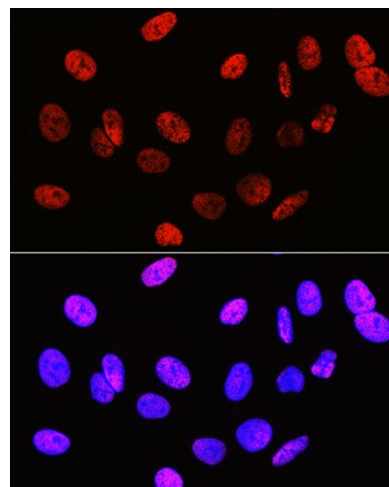
Immunohistochemistry of paraffin-embedded human stomach using H3R2me2s Polyclonal Antibody at dilution of 1:100 (40x lens). Microwave antigen retrieval performed with 0.01M PBS Buffer (pH 7.2) prior to IHC staining.



Immunohistochemistry of paraffin-embedded mouse brain using H3R2me2s Polyclonal Antibody at dilution of 1:100 (40x lens). Microwave antigen retrieval performed with 0.01M PBS Buffer (pH 7.2) prior to IHC staining.



Immunofluorescence analysis of NIH/3T3 cells using H3R2me2s Polyclonal Antibody at dilution of 1:100 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) at 1:500 dilution. Blue: DAPI for nuclear staining.



Immunofluorescence analysis of U2OS cells using H3R2me2s Polyclonal Antibody at dilution of 1:100 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) at 1:500 dilution. Blue: DAPI for nuclear staining.