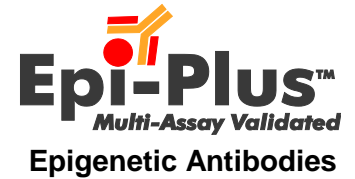


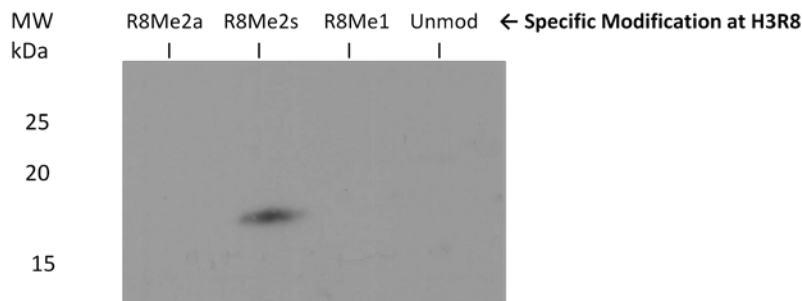


H3R8SDMA pAb: Cat# NB21-1063

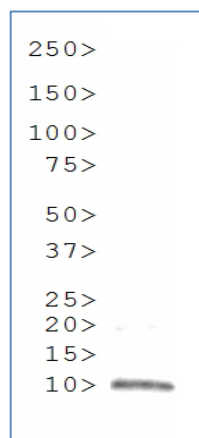


Description: Histone H3 symmetrical dimethyl arginine 8 antibody **Cat#:** NB21-1063
Species: Human, mouse, rat, C. elegans **Gene:** HIST2H3C
Applications: Westerns, dot blots, CHIP **Ab Type:** Rabbit affinity purified pAb
Modification: R8Me2s **Marker:** H3R8Me2s
Immunogen: Synthetic peptide containing symmetrical dimethylated arginine (SDMA) 8 of histone H3
Gene Symbol: HIST2H3C Entrez: 126961 (hu), 260423 (mu) Swiss Prot: Q71DI3 (hu), P84228 (mu)

Images:



Western blot analysis of affinity purified H3R8Me2s antibody Cat # NB21-1063. Above: Synthetic Epi-SynTM H3 proteins with the indicated modifications were run on an SDS-PAGE gel, transferred to nitrocellulose and probed with the Epi-PlusTM affinity purified antibody Cat# NB21-1132 specific for H3R8Me2s. The antibody was used at 1ug/ml, the secondary Ab was a goat x rb, HRP-conjugated, used at 1:40,000 (Jackson Labs) and detection was performed using ECL (Max-ECLTM, 21st Century Biochemicals, Inc.).
Below: C. elegans nuclear preparation from C. elegans embryos.



Background:

The nucleosome is comprised of 146 bp of DNA wrapped around a series of histone proteins arranged as an octamer consisting of 2 copies of histone H2A, H2B, H3 and H4 (1). Within the nucleosome core the histone proteins are covalent

modified at specific residues predominantly within the N-terminal tail including lysine (acetylation, methylation, SUMOylation, and ubiquitylation), arginine methylation and citrullination, serine and threonine phosphorylation, as well as proline isomerization (2,3). The lysine side chains can carry up to three methyl groups (mono-, di- and trimethylated forms) and the arginine side chain can be monomethylated or can be dimethylated as the symmetric or asymmetric forms. The modifications show temporal, disease-specific, and other types of cell-specific regulation and there are specific families of enzymes that regulate the methylation, demethylation, acetylation, deacetylation and other modifications (4-8).

Arginine methylation is found on both nuclear and cytoplasmic proteins. Protein arginine N-methyltransferases (PRMTs) catalyze the methylation of arginine residues. Type I PRMTs (PRMT 1, 3, 4 [aka CARM1], 5, and 8) catalyze the formation of monomethyl arginine (MMA) which is then converted to asymmetrical dimethyl arginine (SDMA). Type II PRMTs (PRMT 5, 7, and FBXO11) also regulates a number of different cellular processes, including transcriptional regulation, DNA damage repair, RNA metabolism, protein trafficking and signal transduction. PRMTs methylate glycine- and arginine-rich patches (GAR motifs) and it has also been shown that PRMT4 (CARM1) and PRMT5 can methylate PGM motifs (proline, glycine, methionine and arginine rich domains). The activity of PRMT2 and 9 has yet to be determined.

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5. Heintzman ND, Stuart RK, Hon G, Fu Y, Ching CW, Hawkins RD, Barrera LO, Van Calcar S, Qu C, Ching KA, Wang W, Weng Z, Green RD, Crawford GE, Ren B. Distinct and predictive chromatin signatures of transcriptional promoters and enhancers in the human genome. *Nat Genet.* [2007] 39(3):311-8.
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7. Bernstein BE, Meissner A, Lander ES. The mammalian epigenome. *Cell.* [2007] 128(4):669-81.
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Dilutions: WB – 1ug/ml; ChIP 2-5 micrograms per 10⁶ cells.

Unit Size: 50 micrograms (0.05mg) and 25 micrograms (0.025mg)

Storage: Short term storage at 4°C, long term storage at -20°C. Avoid unnecessary freeze-thaw.

Buffer: PBS, pH 7.4 with 30% glycerol

Preservative: 0.05% sodium azide

Limitations: This product is for research purposes only and is not approved for use in clinical diagnostics or for use in humans.

[Ask a question](#)

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Epi-Plus™ Epigenetic Antibodies are made in collaboration with Novus Biologicals, LLC

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