AbFlex® Histone H3K9me2 antibody (rAb)

Catalog Nos: 91335, 91336
RRID: AB_3216343
Application(s): WB
Reactivity: Wide Range Predicted

Quantities: 100 µg, 10 µg
Purification: Protein A Chromatography
Host: Rabbit
Isotype: IgG
Molecular Weight: 17 kDa

Background: AbFlex® antibodies are recombinant antibodies (rAbs) that have been generated using defined DNA sequences to produce highly specific, reproducible antibodies. Each AbFlex antibody contains a 6xHis Tag, a Biotinylation Tag for enzymatic biotin conjugation using the biotin ligase, BirA, and a sortase recognition motif (LPXTG) to attach a variety of labels directly to the antibody including fluorophores, enzymatic substrates (HRP, AP), peptides, drugs as well as solid supports. AbFlex Histone H3K9me2 antibody was expressed in CHO cells, and contains rabbit immunoglobulin heavy and light chains.

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 antibody was raised against a branched peptide containing dimethyl lysine 9 of human Histone H3.

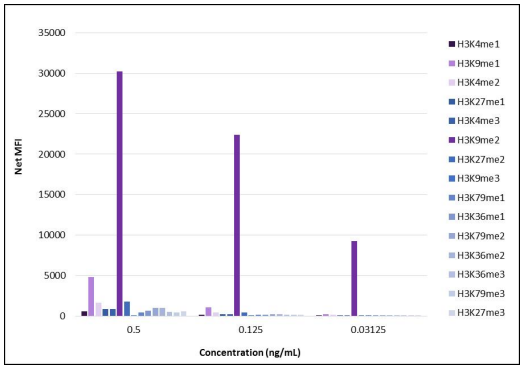
Buffer: 140 mM Hepes, pH 7.5, 70 mM NaCl, 32 mM NaOAc, 0.035% sodium azide, and 30% glycerol. Sodium azide is highly toxic.

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

*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.

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.

AbFlex® Histone H3K9me2 antibody tested by Western blot.
20 µg of HeLa nuclear extract* was run on SDS-PAGE and probed with antibody at 0.5 µg/ml.



AbFlex® Histone H3K9me2 antibody (rAb) tested by Luminex bead-based specificity analysis.
Luminex bead-based specificity analysis was used to confirm the specificity of AbFlex® Histone H3K9me2 antibody (rAb) antibody for methyl-lysine 9 H3. Peptides corresponding to regions around major sites of histone H3 methylation or other methyl-lysine peptides were conjugated to MagPlex Luminex beads and incubated with various amounts of AbFlex®Histone H3K9me2 antibody (rAb). Peptide-bound antibody was detected with anti-mouse IgG-Phycoerythrin and read in a Luminex instrument.

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