

AbFlex® Histone H4K20me3 antibody (rAb)

Catalog Nos: 91107, 91108

RRID: AB_2793777

Application(s): ChIP, ChIP-Seq, ELISA, ICC, IF, WB

Reactivity: Human, Wide Range Predicted

Quantities: 100 µg, 10 µg

Purification: Ni-NTA

Host: Mouse

Isotype: IgG2a

Concentration: 1 µg/µl

Molecular Weight: 8 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 H4K20me3 antibody was expressed as full-length IgG with mouse immunoglobulin heavy and light chains (IgG2a isotype) in mammalian 293 cells.

Histone H4 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). 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.

Histone 4 lysine 20 (H4K20) can be mono-, di- or trimethylated by different histone methyltransferases such as NSD1 or ASH1. The methylation of this lysine is often associated with transcriptional repression.

Immunogen: This Histone H4 trimethyl Lys20 antibody (rAb) was raised against a peptide containing trimethyl Lys20 of Histone H4.

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

Application Notes:

Validated Applications:

ChIP-seq: 4 µg per ChIP

ICC/IF: 1 - 2 µg / mL

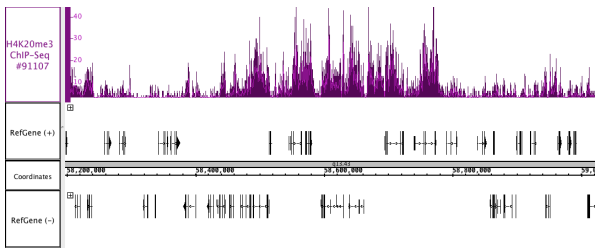
WB: 0.5 - 2 µg/ml dilution

Bead-based ELISA: 6 - 164 ng/ml

Slight reactivity towards histone H4 dimethyl Lys20 might be observed under certain conditions. Individual optimization may be required.

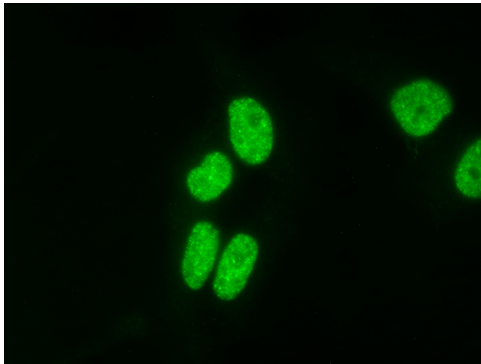
Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Upon receipt, unconjugated antibodies may be stored at -20°C for up to 2 years. Fluorophore- & enzyme-conjugated antibodies should be stored at 4°C. Fluorophore-conjugated antibodies should be protected from light. Keep reagents on ice when not in storage; to avoid repeated freeze/thaw cycles, we recommend aliquoting items that will be stored frozen into single-use fractions prior to freezing. This product is guaranteed for 6 months from date of receipt.

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



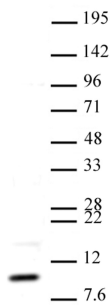
AbFlex[®] Histone H4K20me3 Antibody (rAb) tested by ChIP-Seq.

ChIP was performed using the ChIP-IT[®] High Sensitivity Kit (Cat. No. 53040) with 30 µg of chromatin from T-47D, mammary epithelial ductal cells and 4 µg of antibody. ChIP DNA was sequenced on the Illumina HiSeq and 20 million sequence tags were mapped to identify Histone H4K20me3 binding sites. The image shows binding across a region of chromosome 19.



AbFlex[®] H4K20me3 antibody (rAb) tested by immunofluorescence.

HeLa cell stained with 2µg /mL of AbFlex[®] H4K20me3 antibody (rAb) followed by anti-mouse-IgG-488.



AbFlex[®] Histone H4K20me3 antibody (rAb) tested by Western blot.

HeLa nuclear extract (20 µg per lane) probed with AbFlex[®] Histone H4K20me3 antibody (rAb) (2 µg/ml dilution).

AbFlex[®] Histone H4K20me3 antibody (rAb) tested by Luminex bead-based specificity analysis. Luminex bead-based specificity analysis was used to confirm the specificity of AbFlex[®] Histone H4K20me3 antibody (rAb) antibody for Histone H4K20me3. Various methyl-lysine H4 or H3 peptides were conjugated to MagPlex Luminex beads and incubated with various amounts of AbFlex[®] Histone H4K20me3 antibody (rAb). Peptide-bound antibody was detected with anti-mouse IgG-Phycoerythrin and read in a Luminex instrument.

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