

## AbFlex<sup>®</sup> Histone H3K4me0 antibody (rAb, rabbit)

**Catalog Nos:** 91317, 91318

**Isotype:** IgG2a

**Application(s):** DB, WB

**Reactivity:** Human

**Quantities:** 100 µg, 10 µg

**Purification:** Protein A Chromatography

**Host:** Rabbit

**Concentration:** 1 µg/µl

**Molecular Weight:** 17 kDa

**Background:** AbFlex<sup>®</sup> 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 H3K4me0 was expressed as full-length IgG with Rabbit immunoglobulin heavy and light chains (IgG2a isotype) in CHO cells.

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). 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. Histone H3 is methylated at lysine 36 by the Set2 (yeast) and NSD1 (mammals) methyltransferases. Dimethylation of lysine 36 of histone H3 is involved with transcriptional elongation by RNA pol II holoenzyme and is a marker of transcribed genes. This antibody recognizes the Histone H3, lysine 4, which is unmethylated.

**Immunogen:** This antibody was raised against a peptide containing the N-terminus of human histone H3.

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

### Application Notes:

Applications Validated by Active Motif:

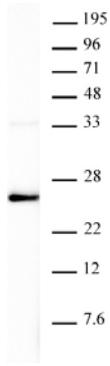
WB: 0.1 – 1 µg/ml

DB: 0.1 - 1 µg/ml

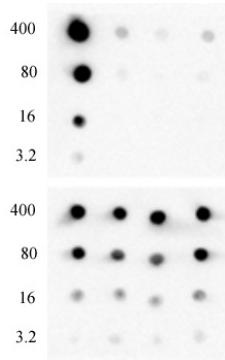
Active Motif also offers AbFlex<sup>®</sup> Histone H3K4me0 antibody (rAb) expressed as full-length IgG with mouse immunoglobulin heavy and light chains (IgG2a isotype), Catalog No. 91267

**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<sup>®</sup> Histone H3K4me0 antibody (rAb) tested by Western blot.  
 20 µg of HeLa nuclear extract was run on SDS-PAGE and probed with  
 AbFlex<sup>®</sup> Histone H3K4me0 antibody at 0.1 µg/ml.



AbFlex<sup>®</sup> Histone H3K4me0 antibody specificity is shown by Dot Blot.  
 Recombinant proteins (ng amounts indicated next to each row) were spotted  
 onto PVDF as follows: Lane 1 - Histone H3 (C110A), Cat. No. 31207; Lane 2  
 - Histone H3K4me1 (EPL), Cat. No. 31287; Lane 3- Histone H3K4me2  
 (EPL), Cat. No. 31277; Lane 4 - Histone H3K4me3 (EPL), Cat. No. 31278.  
 Top Panel was probed with AbFlex Histone H3K4me0 antibody at 0.1 µg/ml.  
 Bottom Panel was probed with Histone H3 mAb (Clone 1B1-B2), Cat. No.  
 61475, at 1 µg/ml.