

Histone H3K36me3 antibody (pAb)

Catalog Nos: 61101, 61902, 61102

RRID: AB_2615073

Isotype: IgG

Application(s): ChIP, ChIP-Seq, CUT&Tag, DB, WB

Reactivity: Human, Mouse, Wide Range Predicted

Quantities: 100 µg, 50 µg, 10 µg

Purification: Protein A Chromatography

Host: Rabbit

Concentration: 1 µg/µl

Molecular Weight: 17 kDa

Background: 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.

Immunogen: This Histone H3 trimethyl Lys36 antibody was raised against a peptide containing trimethyl Lys36 of human histone H3.

Buffer: Purified IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

Application Notes:

Applications Validated by Active Motif:

ChIP: 10 µg per ChIP

ChIP-Seq: 4 µg each

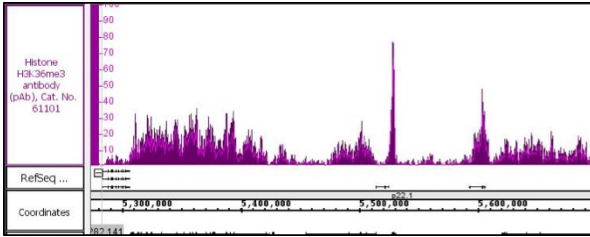
WB: 0.5 - 2 µg/ml dilution

CUT&Tag: 1 µg per 50 µl reaction

For Histone H3K36me3, we also offer AbFlex[®] Histone H3K36me3 Recombinant Antibody (rAb). For details, see Catalog No. 91265.

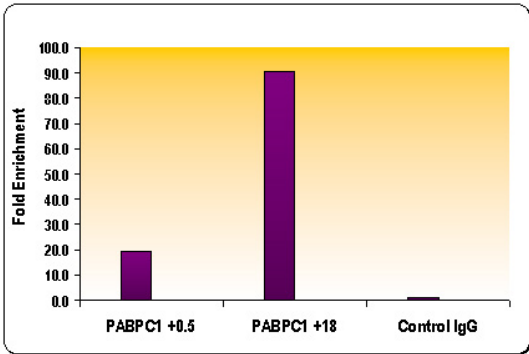
Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

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



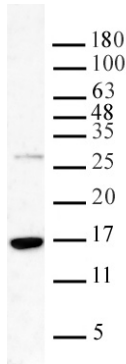
Histone H3K36me3 antibody (pAb) tested by ChIP-Seq.

ChIP was performed using the ChIP-IT[®] High Sensitivity Kit (Cat. No. 53040) with 30 µg of chromatin from a human glioma cell line. ChIP DNA was sequenced on the Illumina NextSeq and 16.8 million sequence tags were mapped to identify H3K36me3 binding on chromosome 7. The antibody was used at 4 µg per ChIP.



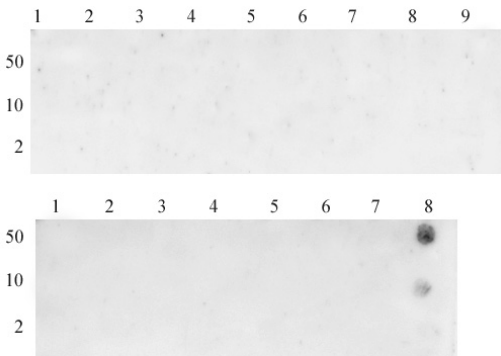
Chromatin IP:

ChIP performed using HeLa Chromatin (1.5 x 10⁶ cell equivalents per ChIP) and 10 µg of Histone H3 trimethyl Lys36 antibody (pAb) or the equivalent amount of rabbit IgG as a negative control. Real time, quantitative PCR (RT-qPCR) was performed on DNA purified from each of the ChIP reactions using a primer pair specific for either the PABPC1 (+ 0.5) or the PABPC1 (+ 18) gene. Data are presented as Fold Enrichment of the ChIP antibody signal versus the negative control IgG using the ddCT method.



Western blot of Histone H3K36me3 pAb.

Nuclear extract of HeLa cells (20 µg) probed with Histone H3K36me3 antibody at a dilution of 0.5 µg/ml.



Dot blot specificity analysis of Histone H3K36me3 pAb:

Dot blot analysis was used to confirm the specificity of Histone H3K36me3 antibody for trimethyl-lysine 36 of histone H3. Peptides corresponding to regions around major sites of histone H3 methylation were spotted onto PVDF and probed with the antibody at a dilution of 1 µg/ml. The amount of peptide (in picomoles) spotted is indicated next to each row. Top panel - Lane 1: unmodified Lys4. Lane 2: K4me1. Lane 3: K4me1. Lane 4: K4me2. Lane 5: K4me3. Lane 6: unmodified Lys9. Lane 7: K9me1. Lane 8: K9me2. Lane 9: K9me3. Lower panel - Lane 1: unmodified Lys27. Lane 2: K27me1. Lane 3: K27me2. Lane 4: K27me3. Lane 5: unmodified Lys36. Lane 6: K36me1. Lane 7: K36me2. Lane 8: K36me3.