Histone H3 K4me2 Antibody

Catalog No. 13-0013

Lot No. 14247001

Pack Size 100 µg

Type	Polyclonal	**Host**	Rabbit
Mol. Wgt.	15 kDa	**Reactivity**	H, M, WR
Format	Aff. Pur. IgG	**Appl.**	ChIP, ChIP-seq, IF, IHC, IP, WB

Product Description:

Histone H3 is one of the four proteins that are present in the nucleosome, the basic repeating unit subunit of chromatin, consisting of 147 base pairs of DNA wrapped around an octamer of core histone proteins (H2A, H2B, H3 and H4). Methylation of lysine 4 of histone H3 (by SET1, ASH1 or the MLL family of methyltransferases) is associated with transcriptional activation, and also frequently found in the context of H3 acetylation at multiple residues.

Immunogen:

Synthetic peptide corresponding to the amino terminus of human histone H3 dimethylated at lysine 4.

Formulation:

Affinity-purified IgG (1 mg/ml) in PBS, pH 7.3, with 0.02% sodium azide and 50% glycerol.

Storage and Stability:

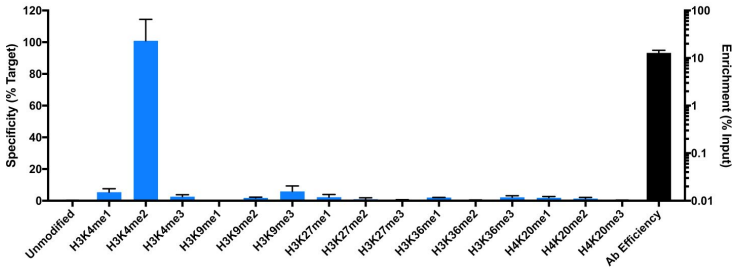
Stable for 2 years at -20°C from date of receipt.

Application Notes:

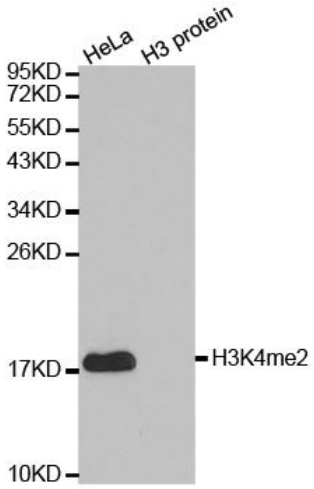
Recommended dilutions:

ChIP 2-5 µg per 1x10^6 cells
IF/IHC 1:50 - 1:200
IP 2-5 µg per IP
WB 1:500 - 1:2000

References Using this Product:



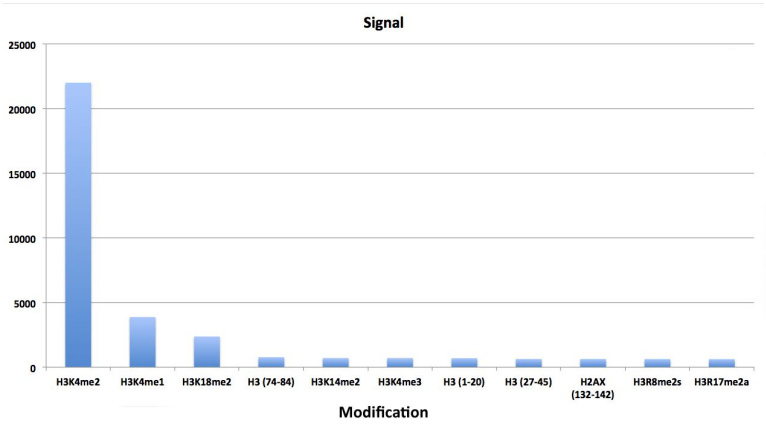
SNAP-ChIP™ qPCR Data: H3K4me2 antibody (3 µg) was tested in a native ChIP experiment with ~1x10^6 HEK-293 cells containing a spike-in of the SNAP-ChIP K-MetStat panel of DNA-barcoded designer nucleosomes (EpiCypher #19-1001). Specificity (left Y-axis) was determined by quantitative real-time PCR (qPCR) for the barcodes corresponding to each uniquely modified nucleosome in the K-MetStat panel (X-axis). Black bar represents antibody efficiency (right Y-axis; log scale) and indicates percentage of the SNAP-ChIP H3K4me2 nucleosome target immunoprecipitated relative to its Input. The antibody exhibited good specificity for the target (<6% cross-reactivity outside H3K4me2) and high efficiency (12.9%). Error bars represent mean ± SEM from two barcoded nucleosome replicates in a single ChIP experiment.



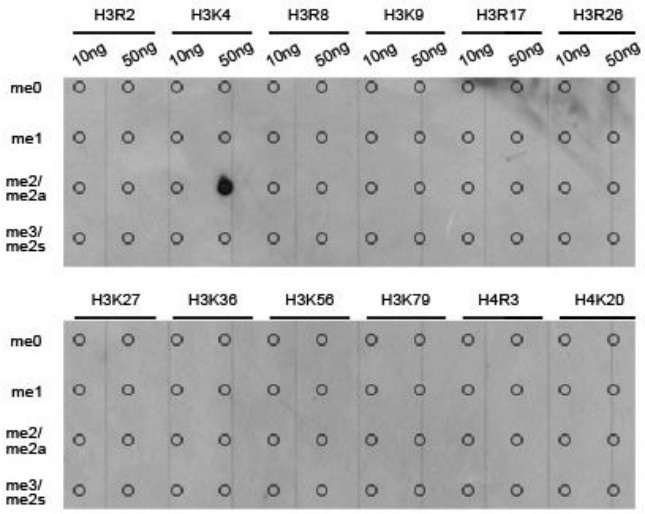
Western Blot Data: HeLa cell extract (HeLa) and recombinant histone H3 (H3 protein) were blotted onto PVDF and probed with Histone H3K4me2 Antibody.

Applications Key: ChIP-Chromatin IP; E-ELISA; FACS-Flow cytometry; IF-Immunofluorescence; IHC-Immunohistochemistry; IP-Immunoprecipitation; WB-Western Blotting

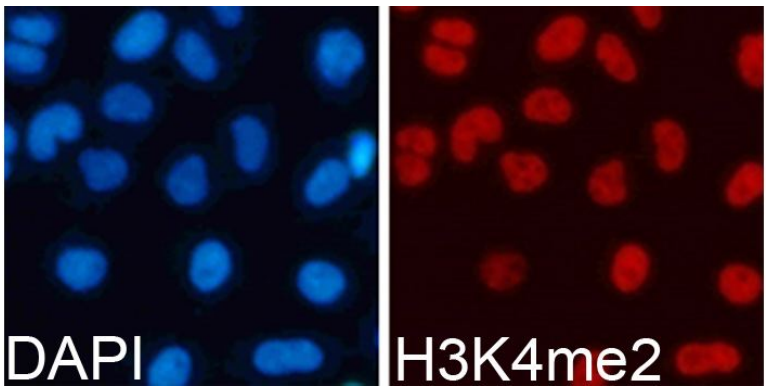
Reactivity Key: B-Bovine; Ce-*C. elegans*; Ch-Chicken; Dm- *Drosophila*; Eu-Eukaryote; H-Human; M-Mouse; Ma-Mammal; R-Rat; Sc-*S.cerevesiae*; Sp-*S. pombe*; WR-Wide Range (predicted); X-Xenopus; Z-Zebrafish



Specificity Data-Peptide Array: EpiTitan™ Histone Peptide array used to confirm the specificity of Histone H3K4me2 Antibody. Data is shown for the highest reacting single modification peptides.



Specificity Data-Dot Blot: Peptide dot blot used to confirm the specificity of Histone H3K4me2 Antibody. Methylated peptides corresponding to the immunogen and related sites were spotted onto PVDF and probed with the antibody.



Immunofluorescence Data: HEK293T cells stained with HIstone H3K4me2 antibody (red) and counterstained with DAPI (blue).

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