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Histone H3K4me3 (H3K4 Trimethyl) Polyclonal Antibody

(Catalog # A-4033)

Background

Modulation of chromatin structure plays an important role in the regulation of transcription in eukaryotes. The nucleosome, made up of DNA wound around eight core histone proteins (two each of H2A, H2B, H3, and H4), is the primary building block of chromatin. The amino-terminal tails of core histones undergo various post-translational modifications, including acetylation, phosphorylation, methylation, and ubiquitination. These modifications occur in response to various stimuli and have a direct effect on the accessibility of chromatin to transcription factors and, therefore, gene expression. In most species, histone H2B is primarily acetylated at Lys5, 12, 15, and 20. Histone H3 is primarily acetylated at Lys9, 14, 18, 23, 27, and 56. Acetylation of H3 at Lys9 appears to have a dominant role in histone deposition and chromatin assembly in some organisms. Phosphorylation at Ser10, Ser28, and Thr11 of histone H3 is tightly correlated with chromosome condensation during both mitosis and meiosis. Phosphorylation at Thr3 of histone H3 is highly conserved among many species and is catalyzed by the kinase haspin. Immunostaining with phospho-specific antibodies in mammalian cells reveals mitotic phosphorylation at Thr3 of H3 in prophase and its dephosphorylation during anaphase.

Description

Histone H3K4me3 (H3K4 Trimethyl) Polyclonal Antibody. Unconjugated. Raised in: Rabbit.

Formulation

PBS with 0.09% Sodium azide,50% glycerol, pH7.3.

Specificity

Broad Range, Mouse, Rat, Human

Isotype

IgG

Uniprot ID

Q16695/P68431

Purification

Affinity Purified

Immunogen

A synthetic peptide corresponding to a sequence within amino acids 1-100 of human histone H3 (NP_003520.1).

Storage

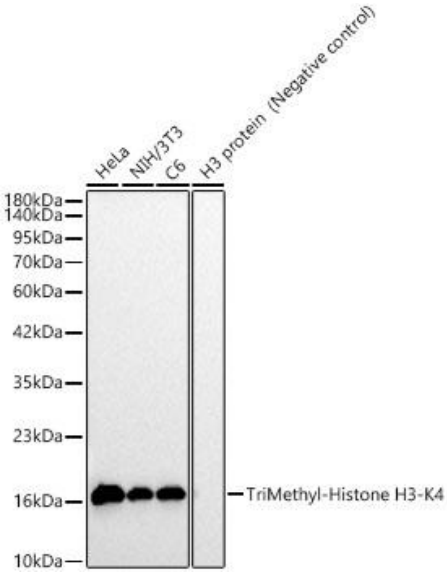
Shipped at 4°C. Upon receipt, store at -20°C. Avoid repeated freeze.

Alternative Names

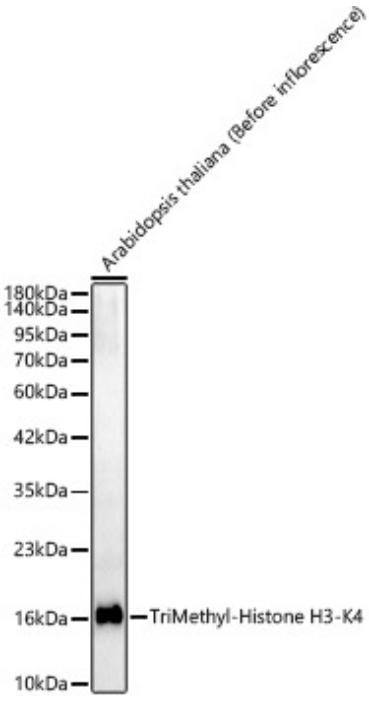
H3K4me3 antibody, H3K4m3 antibody

Applications

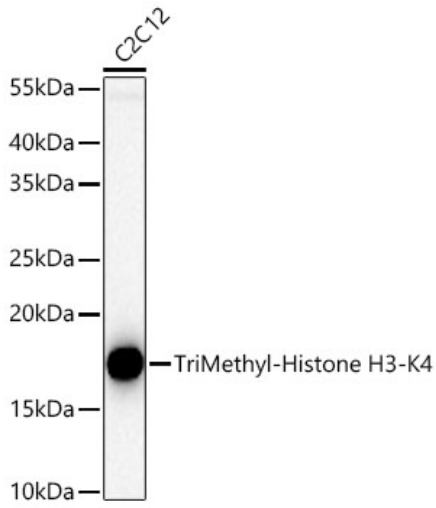
DB, WB, IHC, ChIP, ChIP-seq, ELISA; Recommended dilution, DB 1:500 - 1:2000, WB 1:100 - 1:500, IHC 1:50 – 1:200, ChIP 5µg antibody for 5µg-10µg of Chromatin, ChIP-seq 1:20 - 1:100, ELISA - recommended starting concentration is 1 µg/mL. Please optimize the concentration based on your specific assay requirements.



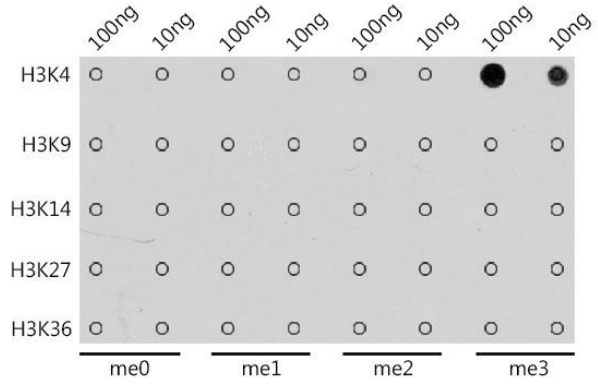
Western blot analysis of various lysates, using Histone H3K4me3 (H3K4 Trimethyl) Polyclonal Antibody at 1:400 dilution.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) at 1:10000 dilution.
Lysates/proteins: 25µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Exposure time: 90s.



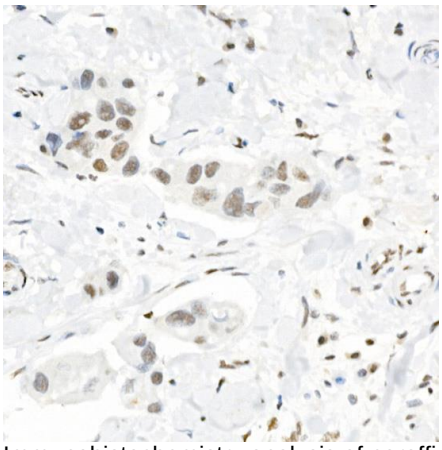
Western blot analysis of Arabidopsis thaliana (Before inflorescence), using Histone H3K4me3 (H3K4 Trimethyl) Polyclonal Antibody at 1:400 dilution.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) at 1:10000 dilution.
Lysates/proteins: 25µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Exposure time: 90s.



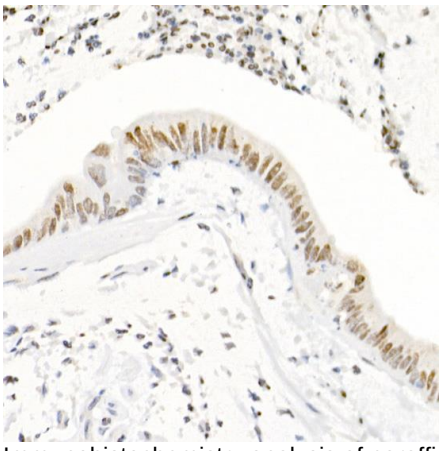
Western blot analysis of lysates from C2C12 cells using Histone H3K4me3 (H3K4 Trimethyl) Polyclonal Antibody at 1:50000 dilution incubated overnight at 4℃.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) at 1:10000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Exposure time: 1s.



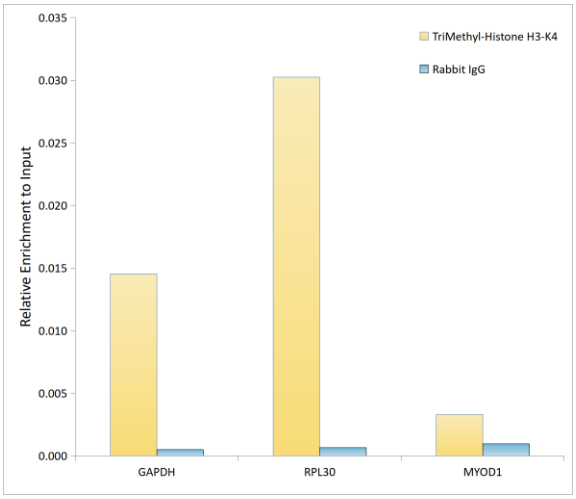
Dot-blot analysis of all sorts of methylation peptides using Histone H3K4me3 (H3K4 Trimethyl) Polyclonal Antibody at 1:1000 dilution.



Immunohistochemistry analysis of paraffin-embedded Human breast cancer using Histone H3K4me3 (H3K4 Trimethyl) Polyclonal Antibody at dilution of 1:20 (40x lens). High pressure antigen retrieval performed with 0.01M Citrate Bufferr (pH 6.0) prior to IHC staining.



Immunohistochemistry analysis of paraffin-embedded Human colon carcinoma using Histone H3K4me3 (H3K4 Trimethyl) Polyclonal Antibody at dilution of 1:20 (40x lens). High pressure antigen retrieval performed with 0.01M Citrate Bufferr (pH 6.0) prior to IHC staining.



Chromatin immunoprecipitation analysis of extracts of 293F cells, using Histone H3K4me3 (H3K4 Trimethyl) Polyclonal Antibody and rabbit IgG. The amount of immunoprecipitated DNA was checked by quantitative PCR. Histogram was constructed by the ratios of the immunoprecipitated DNA to the input.