

TriMethyl-Histone H3-K27 Rabbit Polyclonal Antibody

CAB2363



Product Information

Size:

20uL, 50uL, 100uL, 200uL

Observed MW:

17kDa

Calculated MW:

15kDa

Applications:

WB IHC IF IP ChIP ChIPseq

Reactivity:

Human, Mouse, Rat, Other
(Wide Range)

Protein Background

Actin is a key regulator of RNA polymerase (Pol) II-dependent transcription. Positive transcription elongation factor b (P-TEFb), a Cdk9/cyclin T1 heterodimer, has been reported to play a critical role in transcription elongation. However, the relationship between actin and P-TEFb is still not clear. In this study, actin was found to interact with Cdk9, a catalytic subunit of P-TEFb, in elongation complexes. Using immunofluorescence and immunoprecipitation assays, Cdk9 was found to bind to G-actin through the conserved Thr-186 in the T-loop. Overexpression and in vitro kinase assays showed that G-actin promotes P-TEFb-dependent phosphorylation of the Pol II C-terminal domain. An in vitro transcription experiment revealed that the interaction between G-actin and Cdk9 stimulated Pol II transcription elongation. ChIP and immobilized template assays indicated that actin recruited Cdk9 to a transcriptional template in vivo and in vitro. Using cytokine IL-6-inducible p21 gene expression system, we revealed that actin recruited Cdk9 to endogenous gene. Moreover, overexpression of actin and Cdk9 increased histone H3 acetylation and acetylated histone H3 binding to a transcriptional template through the interaction with histone acetyltransferase, p300. Taken together, our results suggested that actin participates in transcription elongation by recruiting Cdk9 for phosphorylation of the Pol II C-terminal domain, and the actin-Cdk9 interaction promotes chromatin remodeling.

Immunogen information

Gene ID:

8290

Uniprot

Q16695

Synonyms:

H3.4; H3/g; H3FT; H3t; HIST3H3; Histone H3; HIST1H3A

Antibody Information

Recommended dilutions:

WB 1:500 - 1:2000 IHC 1:50
- 1:200 IF 1:50 - 1:200 IP
1:50 - 1:200 ChIP 1:20 -
1:100 ChIPseq 1:20 - 1:100

Source:

Rabbit

Isotype:

IgG

Purification:

Affinity purification

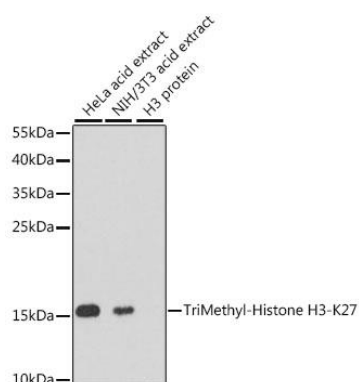
Immunogen:

A synthetic methylated peptide corresponding to residues surrounding K27 of human histone H3

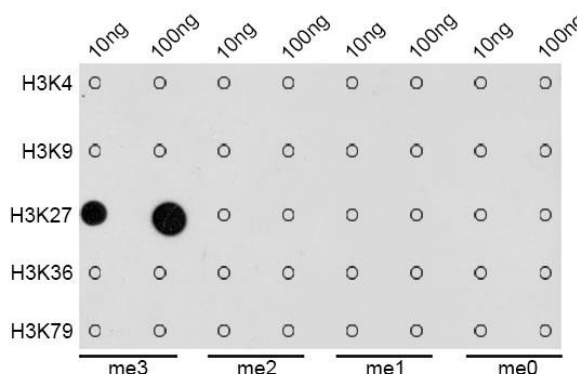
Storage:

Store at -20°C. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

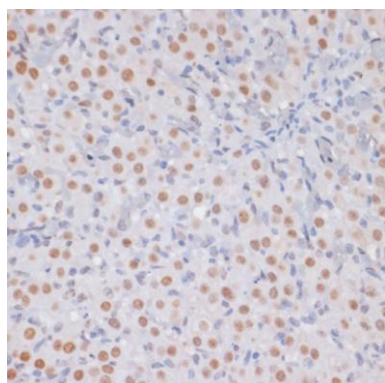
Product Images



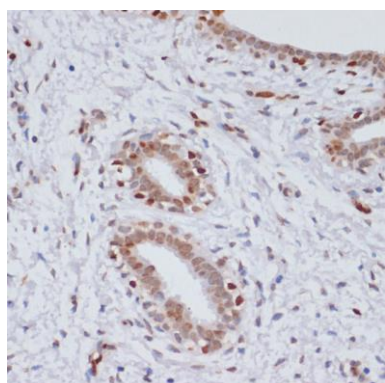
Western blot analysis of extracts of various cell lines, using TriMethyl-Histone H3-K27 antibody (CAB2363) at 1:1000 dilution. Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) (CABS014) at 1:10000 dilution. Lysates/proteins: 25ug per lane. Blocking buffer: 3% nonfat dry milk in TBST. Detection: ECL Basic Kit (CABM00020). Exposure time: 10s.



Dot-blot analysis of all sorts of methylation peptides using TriMethyl-Histone H3-K27 antibody (CAB2363).



Immunohistochemistry of paraffin-embedded rat ovary using TriMethyl-Histone H3-K27 antibody (CAB2363) at dilution of 1:100 (40x lens).



Immunohistochemistry of paraffin-embedded human breast cancer using TriMethyl-Histone H3-K27 antibody (CAB2363) at dilution of 1:100 (40x lens).