

# TriMethyl-Histone H3-K27 Rabbit pAb

Catalog No.: A2363 **28 Publications**

## Basic Information

### Catalog No.

A2363

### Observed MW

17kDa

### Calculated MW

15kDa

### Category

Primary antibody

### Applications

WB, IHC, IF, IP, CHIP, CHIP-seq

### Cross-Reactivity

Human, Mouse, Rat, Other (Wide Range)

## Recommended Dilutions

<b>WB</b>	1:500 - 1:2000
<b>IHC</b>	1:50 - 1:200
<b>IF</b>	1:50 - 1:200
<b>IP</b>	1:50 - 1:200
<b>CHIP</b>	1:20 - 1:100
<b>CHIP-seq</b>	1:20 - 1:100

## Contact

 | [www.abclonal.com](http://www.abclonal.com)

## 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

<b>Gene ID</b>	<b>Swiss Prot</b>
8290	Q16695

### Immunogen

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

### Synonyms

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

## Product Information

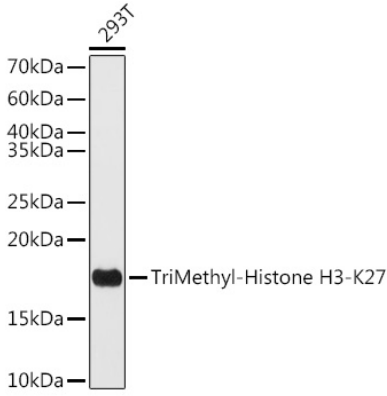
<b>Source</b>	<b>Isotype</b>	<b>Purification</b>
Rabbit	IgG	Affinity purification

### Storage

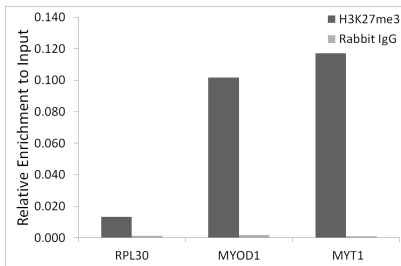
Store at -20°C. Avoid freeze / thaw cycles.

Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

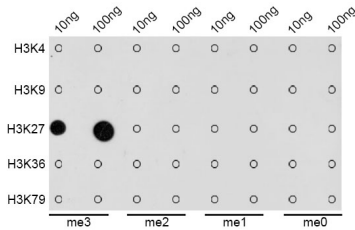
## Validation Data



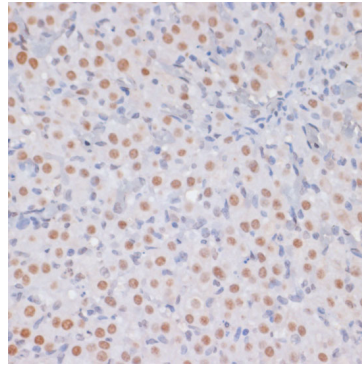
Western blot analysis of extracts of 293T cells, using TriMethyl-Histone H3-K27 antibody (A2363) at 1:1000 dilution.  
 Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.  
 Lysates/proteins: 25ug per lane.  
 Blocking buffer: 3% nonfat dry milk in TBST.  
 Detection: ECL Basic Kit (RM00020).  
 Exposure time: 30s.



Chromatin immunoprecipitation analysis of extracts of HeLa cells, using TriMethyl-Histone H3-K27 antibody (A2363) 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.



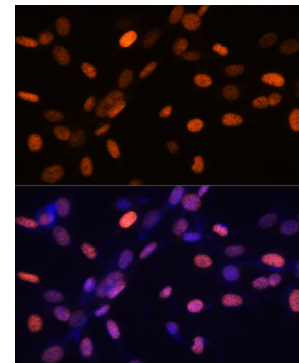
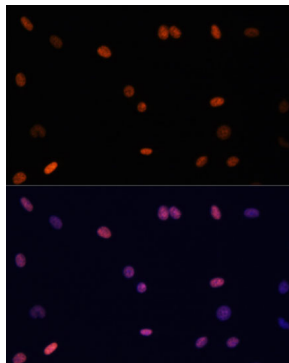
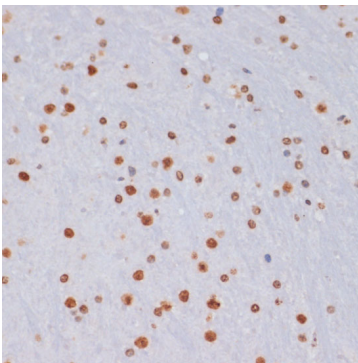
Dot-blot analysis of all sorts of methylation peptides using TriMethyl-Histone H3-K27 antibody (A2363).



Immunohistochemistry of paraffin-embedded rat ovary using TriMethyl-Histone H3-K27 antibody (A2363) at dilution of 1:100 (40x lens).



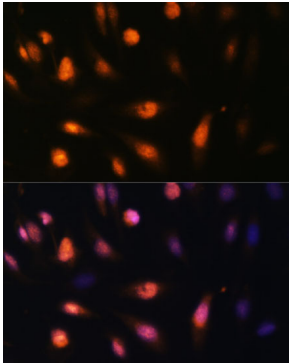
Immunohistochemistry of paraffin-embedded human breast cancer using TriMethyl-Histone H3-K27 antibody (A2363) at dilution of 1:100 (40x lens).



## Validation Data

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Immunohistochemistry of paraffin-embedded mouse brain using TriMethyl-Histone H3-K27 antibody (A2363) at dilution of 1:100 (40x lens).



Immunofluorescence analysis of C6 cells using TriMethyl-Histone H3-K27 antibody (A2363) at dilution of 1:100. Blue: DAPI for nuclear staining.

Immunofluorescence analysis of NIH/3T3 cells using TriMethyl-Histone H3-K27 antibody (A2363) at dilution of 1:100. Blue: DAPI for nuclear staining.

Immunofluorescence analysis of U-2 OS cells using TriMethyl-Histone H3-K27 antibody (A2363) at dilution of 1:100. Blue: DAPI for nuclear staining.