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Datasheet for ABIN3023269

## anti-Histone 3 antibody (H3K27me)

17 Images

14 Publications

### Overview

Quantity:	100 µL
Target:	Histone 3 (H3)
Binding Specificity:	H3K27me
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Histone 3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Chromatin Immunoprecipitation (ChIP), Immunoprecipitation (IP), ChIP DNA-Sequencing (ChIP-seq)

### Product Details

Immunogen:	A synthetic methylated peptide corresponding to residues surrounding K27 of human histone H3
Isotype:	IgG
Cross-Reactivity:	Human, Mouse, Rat
Characteristics:	Methylated Antibodies
Purification:	Affinity purification

### Target Details

Target:	Histone 3 (H3)
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## Target Details

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Alternative Name: Histone H3 ([H3 Products](#))

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**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.,H3.4,H3/g,H3FT,H3t,HIST3H3,Histone H3,HIST1H3A,Signal Transduction,MAPK-Erk Signaling Pathway,MAPK-P38 Signaling Pathway,Epigenetics & Nuclear Signaling,Epigenetic Modifications,Methylation,Histone H3

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Molecular Weight: 15 kDa

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Gene ID: 8290

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UniProt: [Q16695](#)

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## Application Details

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**Application Notes:** 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,CHIP-seq,1:20 - 1:100

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**Restrictions:** For Research Use only

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## Handling

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**Format:** Liquid

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**Buffer:** PBS with 0.02 % sodium azide,50 % glycerol, pH 7.3.

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## Handling

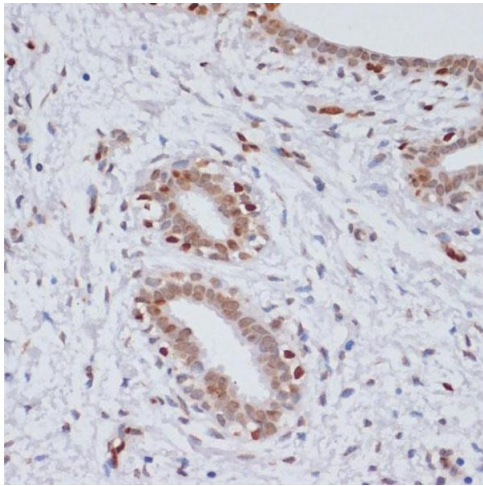
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Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	Avoid freeze / thaw cycles
Storage:	-20 °C
Storage Comment:	Store at -20°C. Avoid freeze / thaw cycles.

## Publications

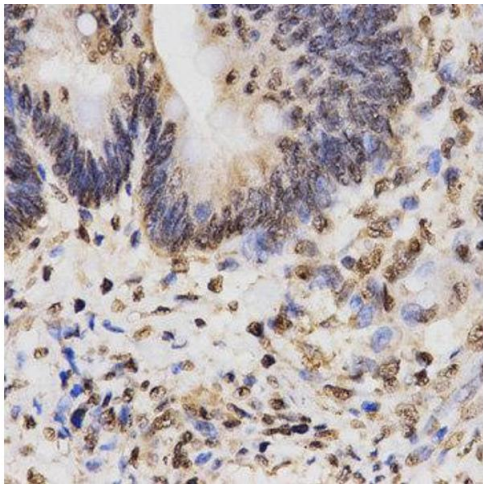
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- Product cited in:
- Wang, Wang, Lin, Ye, Li, Tu, Shen, Li, Yang, Zhang: "Evolutionary dynamics of 3D genome architecture following polyploidization in cotton." in: **Nature plants**, Vol. 4, Issue 2, pp. 90-97, (2018) ([PubMed](#)).
- Cheng, Tan, Lu, Liu, Li, Yuan, Zhao, Zhou: "WOX11 recruits a histone H3K27me3 demethylase to promote gene expression during shoot development in rice." in: **Nucleic acids research**, Vol. 46, Issue 5, pp. 2356-2369, (2018) ([PubMed](#)).
- Wu, Tian, Zhang, Tong, Huang, Li, Zhao, Tang, Yuan, Wang, Fang, Gao, Hu, Li, Qin, Yao, Chen, Chen, Zhang, Liu, Sun, Chen, Wong, Ge, Chen, Ji: "In vivo CRISPR screening unveils histone demethylase UTX as an important epigenetic regulator in lung tumorigenesis." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 115, Issue 17, pp. E3978-E3986, (2018) ([PubMed](#)).
- Dumasia, Kumar, Deshpande, Balasinor: "Estrogen, through estrogen receptor 1, regulates histone modifications and chromatin remodeling during spermatogenesis in adult rats." in: **Epigenetics**, Vol. 12, Issue 11, pp. 953-963, (2018) ([PubMed](#)).
- Yu, Liu, Liu, Wang, Liu, Miao, Du, Yang: "Ascorbic acid induces global epigenetic reprogramming to promote meiotic maturation and developmental competence of porcine oocytes." in: **Scientific reports**, Vol. 8, Issue 1, pp. 6132, (2018) ([PubMed](#)).
- There are more publications referencing this product on: [Product page](#)



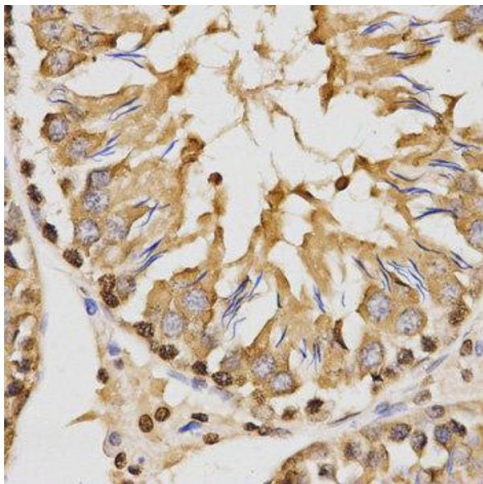
#### Immunohistochemistry

**Image 1.** Immunohistochemistry of paraffin-embedded human breast cancer using TriMethyl-Histone H3-K27 antibody (ABIN3023268, ABIN3023269, ABIN3023270, ABIN1513002 and ABIN6219521) at dilution of 1:100 (40x lens). Perform microwave antigen retrieval with 10 mM PBS buffer pH 7.2 before commencing with IHC staining protocol.



#### Immunohistochemistry

**Image 2.** Immunohistochemistry of paraffin-embedded human rectal cancer tissue using H3K27me3 antibody at dilution of 1:200 (x400 lens).



#### Immunohistochemistry

**Image 3.**

Please check the [product details page](#) for more images. Overall 17 images are available for ABIN3023269.