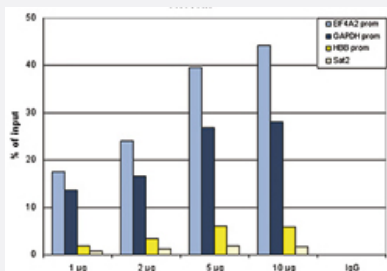


# Histone H3 (K4ac) polyclonal antibody

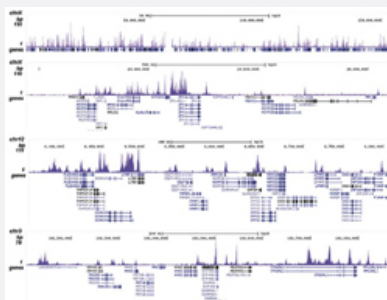
Catalog # PAB31323      Size 50 ug

## Applications



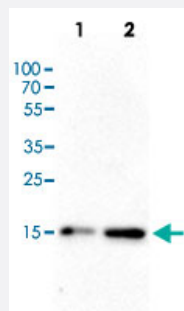
### ChIP

ChIP assays were performed using human HeLa cells. A titration of the antibody consisting of 1, 2, 5 and 10 ug per ChIP experiment was analysed. IgG (1 ug/IP) was used as negative IP control. QPCR was performed with primers for the GAPDH and EIF4A2 promoters, used as positive controls, and for the HBB promoter and the Sat2 satellite repeat, used as negative controls. The figure shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).



### ChIP-Seq

ChIP was performed on sheared chromatin from 4 million HeLa cells. The figure shows the peak distribution along the complete sequence and a 1.5 mb region of the X chromosome and in two regions surrounding the GAPDH and EIF4A2 positive control genes.

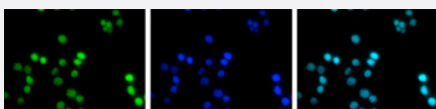


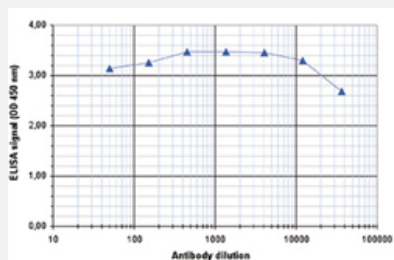
### Western Blot (Cell lysate)

Western Blot (Cell lysate) analysis of (1) 25 ug whole cell extracts of Hela cells, (2) 15 ug histone extracts of Hela cells.

### Immunofluorescence

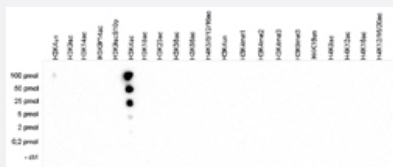
Immunofluorescent staining of Hela cell line with antibody followed by an anti-rabbit antibody conjugated to Alexa488 (left). The middle panel shows staining of the nuclei with DAPI. A merge of the two stainings (right).





## Enzyme-linked Immunoabsorbent Assay

ELISA is a quantitative method used to determine the titer of the antibody using a serial dilution of antibody against Histone H3 (K4ac) in antigen coated wells. The antigen used was a peptide containing the histone modification of interest. By plotting the absorbance against the antibody dilution, the titer of the antibody was estimated to be 1:197500.



## Dot Blot

### Cross reactivity test using the Histone H3 (K4ac) antibody.

Dot Blot analysis was performed with peptides containing other histone H3 and H4 modifications and the unmodified H3K4 sequence. One hundred to 0.2 pmol of the respective peptides were spotted on a membrane. The antibody was used at a dilution of 1:5000. The figure shows a high specificity of the antibody for the modification of interest.

## Specification

<b>Product Description</b>	Rabbit polyclonal antibody raised against synthetic peptide of Histone H3 (K4ac).
<b>Immunogen</b>	A synthetic peptide (conjugated with KLH) corresponding to Histone H3, acetylated at lysine 4.
<b>Host</b>	Rabbit
<b>Reactivity</b>	Human
<b>Form</b>	Liquid
<b>Purification</b>	Affinity purification
<b>Recommend Usage</b>	ELISA (1:1000-10000) Western Blot (1:1000) ChIP (1-2 ug/ChIP) Dot Blot (1:5000) Immunofluorescence (1:200) The optimal working dilution should be determined by the end user.
<b>Storage Buffer</b>	In PBS (0.05% sodium azide, 0.05% proclin 300).
<b>Storage Instruction</b>	Store at -20°C. For long term storage store at -80°C. Aliquot to avoid repeated freezing and thawing.
<b>Note</b>	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

## Applications

- ChIP

ChIP assays were performed using human HeLa cells. A titration of the antibody consisting of 1, 2, 5 and 10 ug per ChIP experiment was analysed. IgG (1 ug/IP) was used as negative IP control. QPCR was performed with primers for the GAPDH and EIF4A2 promoters, used as positive controls, and for the HBB promoter and the Sat2 satellite repeat, used as negative controls. The figure shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

- ChIP-Seq

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- Western Blot (Cell lysate)

Western Blot (Cell lysate) analysis of (1) 25 ug whole cell extracts of HeLa cells, (2) 15 ug histone extracts of HeLa cells.

- Immunofluorescence

Immunofluorescent staining of HeLa cell line with antibody followed by an anti-rabbit antibody conjugated to Alexa488 (left). The middle panel shows staining of the nuclei with DAPI. A merge of the two stainings (right).

- Enzyme-linked Immunoabsorbent Assay

ELISA is a quantitative method used to determine the titer of the antibody using a serial dilution of antibody against Histone H3 (K4ac) in antigen coated wells. The antigen used was a peptide containing the histone modification of interest. By plotting the absorbance against the antibody dilution, the titer of the antibody was estimated to be 1:197500.

- Dot Blot

Cross reactivity test using the Histone H3 (K4ac) antibody.

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## Gene Info — HIST1H3A

Entrez GeneID [8350](#)

Protein Accession# [Q93081](#)

Gene Name HIST1H3A

Gene Alias H3/A, H3FA

Gene Description	histone cluster 1, H3a
Omim ID	<a href="#">602810</a>
Gene Ontology	<a href="#">Hyperlink</a>
Gene Summary	<p>Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. This structure consists of approximately 146 bp of DNA wrapped around a nucleosome, an octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H4). The chromatin fiber is further compacted through the interaction of a linker histone, H1, with the DNA between the nucleosomes to form higher order chromatin structures. This gene is intronless and encodes a member of the histone H3 family. Transcripts from this gene lack polyA tails; instead, they contain a palindromic termination element. This gene is found in the large histone gene cluster on chromosome 6p22-p21.3. [provided by RefSeq]</p>
Other Designations	H3 histone family, member A histone 1, H3a

## Pathway

- [Systemic lupus erythematosus](#)