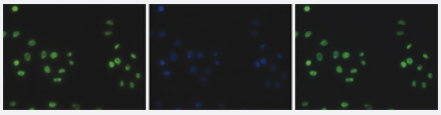
# Histone H2A (K5ac) polyclonal antibody

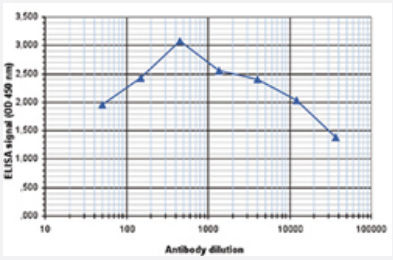
Catalog # PAB31311 Size 50 ug

## Applications



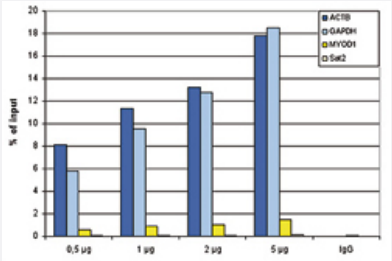
### Immunofluorescence

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

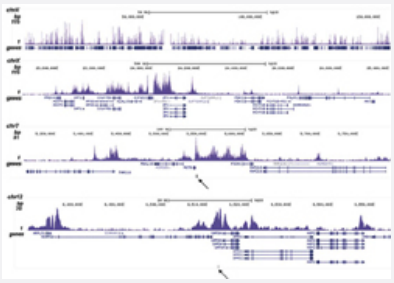
ELISA is a quantitative method used to determine the titer of the antibody using a serial dilution of antibody against Histone H2A (K5ac) in antigen coated wells. The antigen used was a peptide containing the histone modification of interest. By plotting the absorbance against the antibody dilution, the titer of the antibody was estimated to be 1:25000.




### ChIP

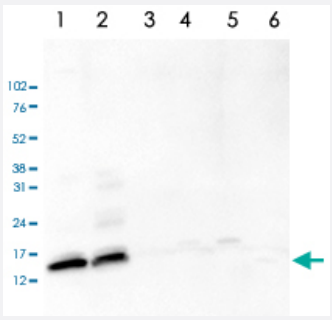
ChIP assays were performed using human HeLa cells. A titration of the antibody consisting of 0.5, 1, 2 and, 5 ug per ChIP experiment was analysed. IgG (1 ug/IP) was used as negative IP control. QPCR was performed with primers for a region approximately 1 kb upstream of the GAPDH and ACTB promoters, used as positive controls, and for the coding region of the inactive MYOD1 gene 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).

Copyright © 2023 Abnova Corporation. All Rights Reserved.



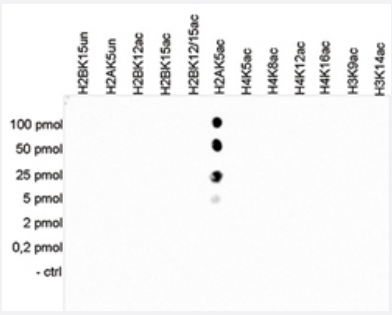
## ChIP-Seq

ChIP was performed on sheared chromatin from 1.5 million HeLaS3 cells using antibody. The figure shows the enrichment along the complete sequence and a 1 Mb region of the X-chromosome and in genomic regions of chromosome 7, surrounding the ACTB gene, and of chromosome 12, surrounding the GAPDH gene. The position of the amplicon used for ChIP-qPCR is indicated by an arrow.




## Western Blot

Western Blot analysis of (1) 25 ug whole cell extracts of Hela cells, (2) 15 ug histone extracts of Hela cells, (3) 1 ug of recombinant histone H2A, (4) 1 ug of recombinant histone H2B, (5) 1 ug of recombinant histone H3, (6) 1 ug of recombinant histone H4.




## Dot Blot

Cross reactivity test using the Histone H2A (K5ac) antibody.
Dot Blot analysis was performed with peptides containing other histone acetylations and the unmodified H2AK5. 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

| | |
|---|---|
| **Product Description** | Rabbit polyclonal antibody raised against synthetic peptide of Histone H2A (K5ac). |
| **Immunogen** | A synthetic peptide (conjugated with KLH) corresponding to Histone H2A, acetylated at lysine 5. |
| **Host** | Rabbit |
| **Reactivity** | Human |
| **Form** | Liquid |
| **Purification** | Affinity purification |

Copyright © 2023 Abnova Corporation. All Rights Reserved.

| | |
|---|---|
| **Recommend Usage** | ELISA (1:4000)<br>Western Blot (1:1000)<br>ChIP (0.5-1 ul/ChIP)<br>Dot Blot (1:5000)<br>Immunofluorescence (1:500)<br>The optimal working dilution should be determined by the end user. |
| **Storage Buffer** | In PBS (0.05% sodium azide, 0.05% proclin 300). |
| **Storage Instruction** | Store at -20°C. For long term storage store at -80°C.<br>Aliquot to avoid repeated freezing and thawing. |
| **Note** | This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only. |

## Applications

- 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 H2A (K5ac) 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 1:25000.

- ChIP

ChIP assays were performed using human HeLa cells. A titration of the antibody consisting of 0.5, 1, 2 and, 5 ug per ChIP experiment was analysed. IgG (1 ug/IP) was used as negative IP control. QPCR was performed with primers for a region approximately 1 kb upstream of the GAPDH and ACTB promoters, used as positive controls, and for the coding region of the inactive MYOD1 gene 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 1.5 million HeLaS3 cells using antibody. The figure shows the enrichment along the complete sequence and a 1 Mb region of the X-chromosome and in genomic regions of chromosome 7, surrounding the ACTB gene, and of chromosome 12, surrounding the GAPDH gene. The position of the amplicon used for ChIP-qPCR is indicated by an arrow.

- Western Blot

Western Blot analysis of (1) 25 ug whole cell extracts of Hela cells, (2) 15 ug histone extracts of Hela cells, (3) 1 ug of recombinant histone H2A, (4) 1 ug of recombinant histone H2B, (5) 1 ug of recombinant histone H3, (6) 1 ug of recombinant histone H4.

Copyright © 2023 Abnova Corporation. All Rights Reserved.

- Dot Blot

Cross reactivity test using the Histone H2A (K5ac) antibody.
Dot Blot analysis was performed with peptides containing other histone acetylations and the unmodified H2AK5. 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.

## Gene Info — HIST3H2A

| | |
|---|---|
| **Entrez GeneID** | 92815 |
| **Protein Accession#** | Q7L7L0 |
| **Gene Name** | HIST3H2A |
| **Gene Alias** | MGC3165 |
| **Gene Description** | histone cluster 3, H2a |
| **Gene Ontology** | Hyperlink |
| **Gene Summary** | Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chro mosomal fiber in eukaryotes. Nucleosomes consist of approximately 146 bp of DNA wrapped aro und a histone octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H 4). 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 H2A family. Transcripts from this gene contain a palindrom ic termination element. [provided by RefSeq |
| **Other Designations** | OTTHUMP00000037948\|histone 3, H2a\|histone H2a |

## Pathway

- Systemic lupus erythematosus

Copyright © 2023 Abnova Corporation. All Rights Reserved.