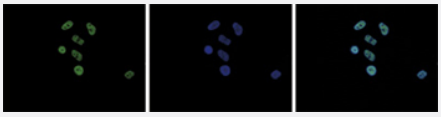
Histone H2AZ polyclonal antibody

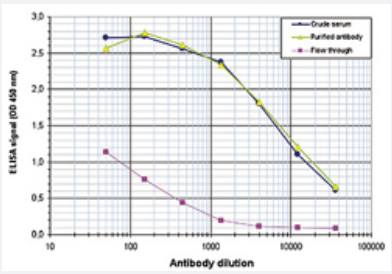
Catalog # PAB31309 Size 50 ug

Applications



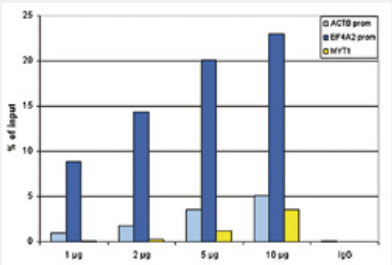
Immunofluorescence

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 H2AZ, crude serum and flow through 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 1:8800.



ChIP

ChIP assays were performed using human HeLa cells. A titration consisting of 1, 2, 5 and 10 ug of antibody per ChIP experiment was analyzed. IgG (2 ug/IP) was used as a negative IP control. QPCR was performed using primers specific for the promoters of the ACTB and EIF4A2 genes, used as positive control targets and for the coding region of the MYT1 gene, used as a negative control target. The figure shows the recovery (the relative amount of immunoprecipitated DNA compared to input DNA). These results confirm the observation that acetylation of Histone H2AZ is present at active promoters.

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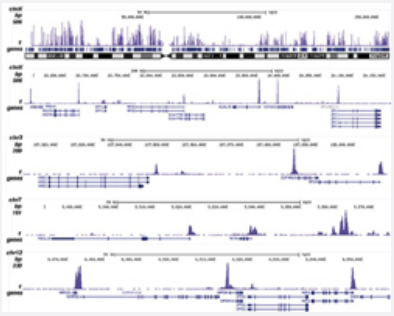
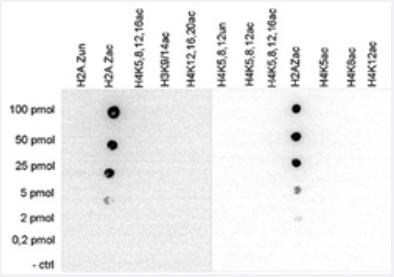


ChIP-Seq

ChIP was performed on sheared chromatin from 1 million HeLaS3 cells. IgG (2 ug/IP) was used as a negative IP control. The figure shows the peak distribution along the complete sequence and a 600 kb region of the X-chromosome and in 100 kb regions surrounding the EIF4A2, ACTB and GAPDH genes. These results clearly show an enrichment of the Histone H2AZ acetylation at the promoters of active genes.



Dot Blot

Cross reactivity test using the Histone H2AZ antibody.
Dot Blot analysis was performed with peptides containing other histone acetylations and the unmodified Histone HAZ sequence. One hundred to 0.2 pmol of the respective peptides were spotted on a membrane. The antibody was used at a dilution of 1:20000. 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 H2AZ.
Immunogen	A synthetic peptide (conjugated with KLH) corresponding to Histone HAZ, acetylated at lysines 4, 7 a nd 11.
Host	Rabbit
Reactivity	Human
Form	Liquid
Purification	Affinity purification
Recommend Usage	ELISA (1:200) ChIP (1 ug/ChIP) Dot Blot (1:20000) Immunofluorescence (1:500) 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. Aliquot to avoid repeated freezing and thawing.

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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 H2AZ, crude serum and flow through 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 1:8800.

- ChIP

  ChIP assays were performed using human HeLa cells. A titration consisting of 1, 2, 5 and 10 ug of antibody per ChIP experiment was analyzed. IgG (2 ug/IP) was used as a negative IP control. QPCR was performed using primers specific for the promoters of the ACTB and EIF4A2 genes, used as positive control targets and for the coding region of the MYT1 gene, used as a negative control target. The figure shows the recovery (the relative amount of immunoprecipitated DNA compared to input DNA). These results confirm the observation that acetylation of Histone H2AZ is present at active promoters.

- ChIP-Seq

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- Dot Blot

  Cross reactivity test using the Histone H2AZ antibody.
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Gene Info — H2AFZ

Entrez GeneID	3015
Protein Accession#	P0C0S5
Gene Name	H2AFZ
Gene Alias	H2A.z, H2A/z, H2AZ, MGC117173

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Gene Description	H2A histone family, member Z
Omim ID	142763
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 encodes a r eplication-independent member of the histone H2A family that is distinct from other members of th e family. Studies in mice have shown that this particular histone is required for embryonic develop ment and indicate that lack of functional histone H2A leads to embryonic lethality. [provided by Ref Seq
Other Designations	H2AZ histone

Publication Reference

- CpG signalling, H2A.Z/H3 acetylation and microRNA-mediated deferred self-attenuation orchestrate foetal NOS3 expression.

  Postberg J, Kanders M, Forcob S, Willems R, Orth V, Hensel KO, Weil PP, Wirth S, Jenke AC.

  Clinical Epigenetics 2015 Feb; 7(1):9.

  Application: ChIP, Human, HUVECs

Pathway

- Systemic lupus erythematosus

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