Acetyl-Histone H2-AK5 Rabbit pAb

Catalog No.: RA8001

Basic Information

Observed MW

17KDa

Calculated MW

17KDa

Category

Primary antibody

Applications

IF/ICC,ChIP

Cross-Reactivity

Human,Mouse,Rat,Other (Wide Range)

Background

The H2AK5ac antibody is primarily used in the study of chromatin structure and function. This acetylation modification, which typically occurs on lysine residues of histones, is a key mechanism in epigenetic regulation. In the cell nucleus, histone acetylation can affect the compactness of chromatin, thereby regulating gene expression.

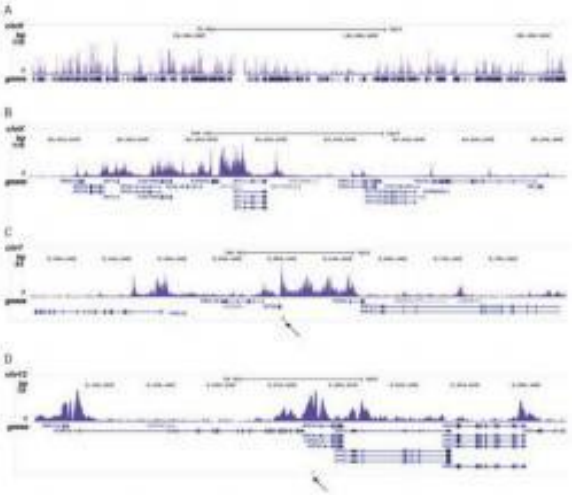
The acetylation of H2AK5ac is mediated by histone acetyltransferases (HATs), and this modification can be removed by histone deacetylases (HDACs). Therefore, the level of H2AK5ac reflects the dynamic balance of HAT and HDAC activity within the cell. Studying this modification is crucial for understanding processes like gene expression regulation, cell differentiation, and the development of cancer.

Recommended Dilutions

ELISA	1: 25000
WB	1:1000
Array	1: 5000
ChIP-Seq	Assay-dependent
ChIP	0.5-1 μg

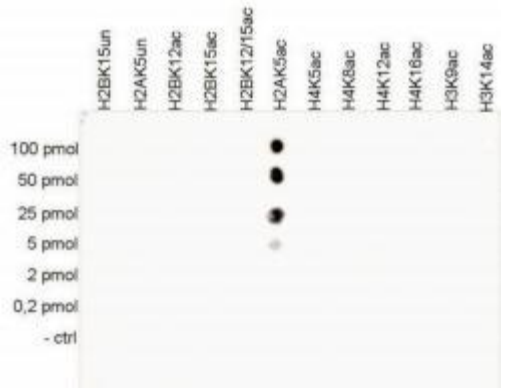
Product Information

Immunogen	KLH-conjugated synthetic peptid corresponding to human the region of histone H2A containing the acetylated lysine 5 (H2AK5ac).
Form	Liquid
Concentration	0.93 mg/mL
Purification	Antigen affinity chromatography
Storage buffer	PBS, pH 7.4
Contains	0.05% sodium azide
Storage Conditions	-20°C or -80°C if preferred
RRID	AB_2609563



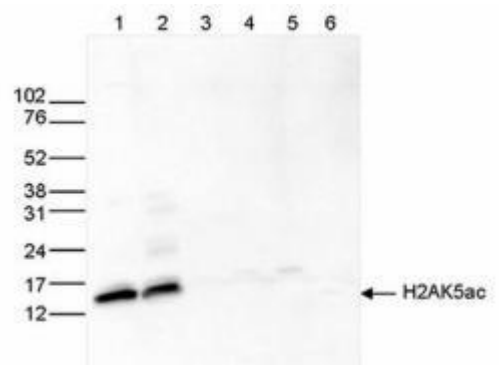
H2AK5ac Antibody (RA8001) in ChIP-seq

ChIP was performed on sheared chromatin from 1.5 million HeLaS3 cells using 0.5 µg of Acetyl-Histone H2A (Lys5) polyclonal antibody. The IP'd DNA was subsequently analyzed on a HiSeq. Library preparation, cluster generation and sequencing were performed according to the manufacturer's instructions. The 51 bp tags were aligned to the human genome using the BWA algorithm. Figure 2 shows the enrichment along the complete sequence and a 1 Mb region of the X-chromosome (fig 2A and B) and in genomic regions of chromosome 7, surrounding the ACTB gene, and of chromosome 12, surrounding the GAPDH gene (fig 2C and D). The position of the amplicon used for ChIP-qPCR is indicated by an arrow.



H2AK5ac Antibody (RA8001)

A Dot Blot of the specific peptide and other relevant peptides when tested using Acetyl-Histone H2A (Lys5) antibody , showed that Acetyl- Histone H2A (Lys5) was specifically recognized by the antibody. {ARRAY}



H2AK5ac Antibody (RA8001) in WB

Western blot was performed on whole cell (25 g, lane 1) and histone extracts (15 g, lane 2) from HeLa cells, and on 1 g of recombinant histone H2A, H2B, H3 and H4 (lane 3, 4, 5 and 6, respectively) using the anti-H2AK5ac antibody . The antibody was diluted 1:1,000 in TBS-Tween containing 5% skimmed milk. The marker (in kDa) is shown on the left.