Acetyl-Histone H3-K4 Rabbit mAb

Catalog No.: RA8014

Basic Information

Observed MW
17KDa

Calculated MW
16kDa

Category
Primary antibody

Applications
IF/ICC,ChIP

Cross-Reactivity

Human Yeast

Background

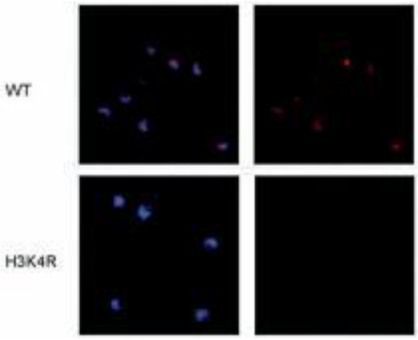
Histones are the main constituents of the protein part of chromosomes of eukaryotic cells. They are rich in the amino acids arginine and lysine and have been greatly conserved during evolution. Histones pack the DNA into tight masses of chromatin. Two core histones of each class H2A, H2B, H3 and H4 assemble and are wrapped by 146 base pairs of DNA to form one octameric nucleosome. Histone tails undergo numerous post-translational modifications, which either directly or indirectly alter chromatin structure to facilitate transcriptional activation or repression or other nuclear processes. In addition to the genetic code, combinations of the different histone modifications reveal the so-called "histone code". Histone methylation and demethylation is dynamically regulated by respectively histone methyl transferases and histone demethylases.

Recommended Dilutions

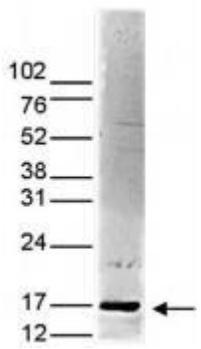
ELISA	1: 500
WB	1: 500
Dot Blot	1: 10000
IF/ICC	1: 300
ChIP	0.5 μg

Product Information

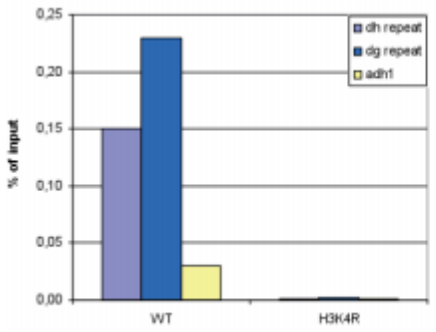
Source	Rabbit
Isotype	IgG
Purification	Affinity purified.
Storage Conditions	Store at -20°C; for long storage, store at -80°C. Avoid multiple freeze-thaw cycles.
Storage buffer	In PBS with 0.05% sodium azide and 0.05% ProClin 300.



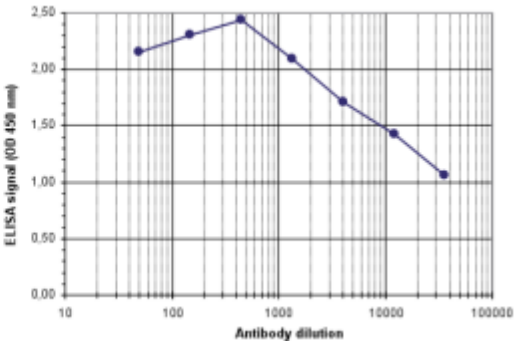
Wild type and H3K4R mutant S. pombe cells were stained with both the antibody (in red) and by Hoechst staining (in blue, left), or with the antibody alone (right). The antibody was used at a dilution of 1:300.



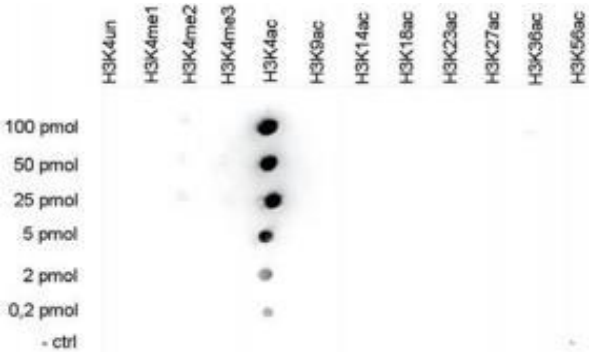
HeLa cells extracts (15 µg) were analysed by WB blot using the antibody



ChIP assays were performed using WT and H3K4R mutant S. pombe and the antibody and optimized PCR primer sets for qPCR. The Fig shows the recovery, expressed as a % of input (the relative amount of IP DNA compared to input DNA after qPCR analysis).



To determine the titer, an ELISA was performed using a serial dilution of the antibody. 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 1:27800.



A Dot Blot analysis was performed to test the cross reactivity of the antibody with peptides containing other modifications of histone H3 and the unmodified H3K4 sequence. 100 to 0.2 pmol of the peptide containing the respective histone modification were spotted on a membrane. The Fig shows a high specificity of the antibody for the modification of interest.