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antibody and ELISA experts

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Anti-H4K8ac HIST1H4A Antibody

Catalog Number: CI1021

About HIST1H4A

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. Acetylation of histone H4 is associated with active gene transcription.

Overview

Product Name	Anti-H4K8ac HIST1H4A Antibody
Reactive Species	Human
Description	Boster Bio Anti-H4K8ac HIST1H4A Antibody (Catalog# CI1021). Tested in ChIP, ELISA, Dot blot, WB applications. This antibody reacts with Human.
Application	ChIP, Dot blot, ELISA, WB
Clonality	Polyclonal
Formulation	Whole antiserum from rabbit containing 0.05% azide.
Storage Instructions	Store at -20°C. For long-term storage, store at -80°C. Avoid multiple freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P62805

Technical Details

Immunogen	This antibody is raised in rabbit against histone H4 containing the acetylated lysine 8 (H4K8ac), using a KLH-conjugated synthetic peptide.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot. Boster recommends high sensitivity ChIP-seq Kit (CK1001 & CK1002) for Chromatin Immunoprecipitation.
Form	Liquid
Concentration	0.5-1mg/ml, actual concentration vary by lot. Use suggested dilution ratio to decide dilution procedure.
Purification	Whole antiserum

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Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: User needs to optimize the dilution ratio for this antibody.

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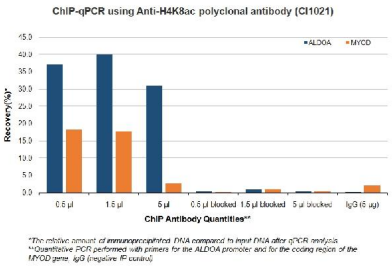
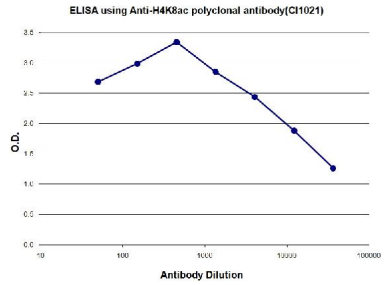
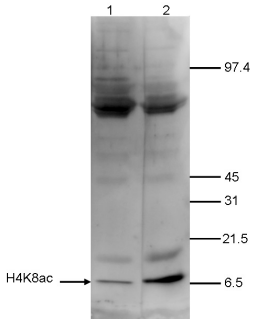
Anti-H4K8ac HIST1H4A Antibody (CI1021) Images



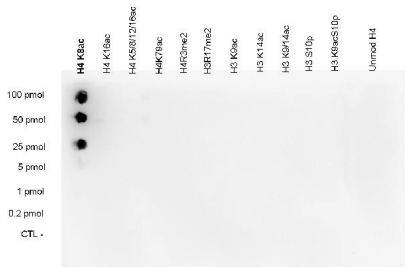
ChIP assays were performed using human osteosarcoma (U2OS) cells, Anti-H4K8ac polyclonal antibody (Catalog # CI1021) and optimized PCR primer sets for qPCR. A titration of the antibody consisting of 0.5, 1.5 and 5 l per ChIP experiment was analysed. Additionally, ChIP was performed after incubation of the antibody with 5 nmol blocking peptide for 1 hour at room temperature. IgG (5 ug/IP) was used as negative IP control. QPCR was performed with primers for the ALDOA promoter (fructose-bisphosphate aldolase A) and for the coding region of the myogenic differentiation gene (MYOD), a gene that is inactive at normal conditions.



To determine the titer of the antibody, an ELISA was performed using a serial dilution of Anti-H4K8ac polyclonal antibody (Catalog # CI1021). 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 wasestimated to be 1:17,500.



Western blot analysis of H4K8ac expression in histone extracts from HeLa cells (15



A Dot Blot analysis was performed to test the cross reactivity of Anti-H4K8ac polyclonal antibody (Catalog # CI1021) with peptides containing other modifications of histone H4 and H3 and an unmodified histone H4 sequence. One hundred to 0.2 pmol of the peptide containing the respective histone modification were spotted on a membrane. The antibody was used at a dilution of 1:20,000. This figure shows a high specificity of the antibody for the modification of interest.

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