BOSTER
antibody and ELISA experts

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-H4K20me3 HIST1H4A Antibody

Catalog Number: CI1011

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. H4K20me3 is a marker for heterochromatin.

Overview

Product Name	Anti-H4K20me3 HIST1H4A Antibody
Reactive Species	Human
Description	Boster Bio Anti-H4K20me3 HIST1H4A Antibody catalog # CI1011. Tested in ChIP, ChIP-qPCR, WB applications. This antibody reacts with Human.
Application	ChIP, ChIP-qPCR, WB
Clonality	Polyclonal
Formulation	Whole antiserum from rabbit containing 0.05% azide.
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P62805

Technical Details

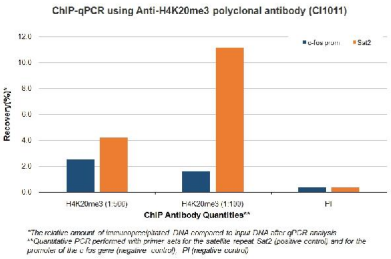
Immunogen	This antibody is raised in rabbit against histone H4 containing the trimethylated lysine 20 (H4K20me3), using a KLH-conjugated synthetic peptide.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot. Boster recommends high 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.

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

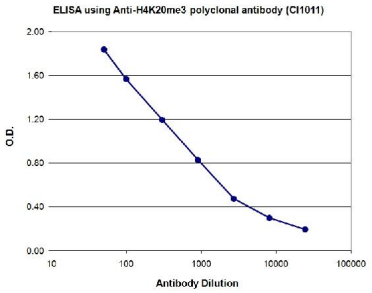
Purification	Whole antiserum
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some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

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

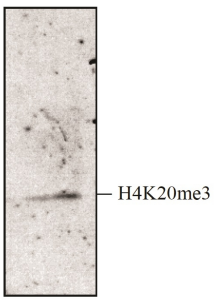
Anti-H4K20me3 HIST1H4A Antibody (CI1011) Images



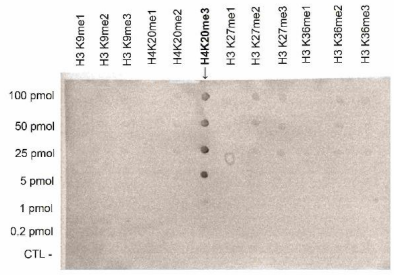
ChIP assays were performed using undifferentiated human teratocarcinoma cells (NCCIT), Anti-H4K20me3 polyclonal antibody (Catalog # CI1011) and optimized PCR primer sets for qPCR. The antibody was tested at two different dilutions of 1:500 and 1:100. The pre-immune serum (PI) was used as a negative control. Quantitative PCR was performed using primer sets for the satellite repeat Sat2 as a positive control and for the promoter of the house keeping gene c-fos, as a negative control.



To determine the titer of the antibody, an ELISA was performed using a serial dilution of Anti-H4K20me3 polyclonal antibody (Catalog # CI1011). 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 1:700.



Western blot analysis of H4K20me3 expression in histone (acid) extracts from NB4 (human promyelocytic leukemia) cells. H4K20me3 was detected using Anti-H4K20me3 polyclonal antibody (Catalog # CI1011) at 1/750 dilution.



A Dot Blot analysis was performed to test the cross reactivity of Anti-H4K20me3 polyclonal antibody (Catalog # CI1011) with peptides containing other modifications of histone H3 and H4. Other histone modifications include mono and dimethylation of the same lysine and mono-, di- and trimethylation of lysines 9, 27 and 36 of H3. One hundred to 0.2 pmol of peptide containing the respective histone modification were spotted on a membrane. The antibody was used at a dilution of 1:1,000. This figure shows a high specificity of the antibody for the modification of interest.

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-H4K20me3 HIST1H4A Antibody