

PRODUCT NAME H3K9ac polyclonal antibody		
Cat. No. pAb-004-050	Type: Polyclonal	Size: 50 µg/ 35 µl
Lot #: A378-004	Source: Rabbit	Concentration: 1.45 µg/µl

Description: This antibody has been raised in rabbit against histone H3, acetylated at lysine 9 (H3K9ac), using a KLH-conjugated synthetic peptide.

Specificity: Human: positive
Other species: not tested

Applications	Suggested dilution	References
ChIP	2 µg per IP	Fig 1
ELISA	1:50	Fig 2
Dot blotting	1:20,000	Fig 3

Purity: Affinity purified polyclonal antibody in PBS containing 0.05% azide and 0.05% ProClin 300.

Storage: Store at -20°C; for long storage, store at -80°C. Avoid multiple freeze-thaw cycles.

Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.

References citing this antibody:

- (1) Flueck C, Bartfai R, Volz J, Niederwieser I, Salcedo-Amaya AM, Alako BT, Ehlgen F, Ralph SA, Cowman AF, Bozdech Z, Stunnenberg HG and Voss TS (2009) Plasmodium falciparum heterochromatin protein 1 marks genomic loci linked to phenotypic variation of exported virulence factors. PLoS Pathog 5, e1000569.

Last data sheet update: April 16, 2010

Target description

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.

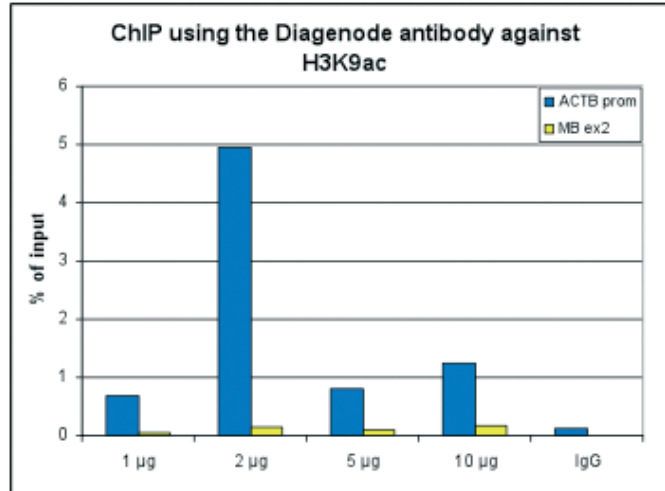


Figure 1

ChIP results obtained with the Diagenode antibody directed against H3K9ac

ChIP assays were performed using U2OS cells, the Diagenode antibody against H3K9ac (cat# pAb-004-050) and optimized PCR primer sets for qPCR. ChIP was performed with the “HighCell# ChIP” kit (cat# kch-mahigh-A16), using sheared chromatin from 1.6 million cells. A titration of the antibody consisting of 1, 2, 5 and 10 µg per ChIP experiment was analysed. IgG (5 µg/IP) was used as negative IP control. Quantitative PCR was performed with primers for the promoter of the active gene ACTB (cat# pp-1005-050), and for exon 2 of the inactive MB gene (cat# pp-1006-050). Figure 3 shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis). These results are in accordance with the observation that H3K9 acetylation is enriched at the promoters of active genes.

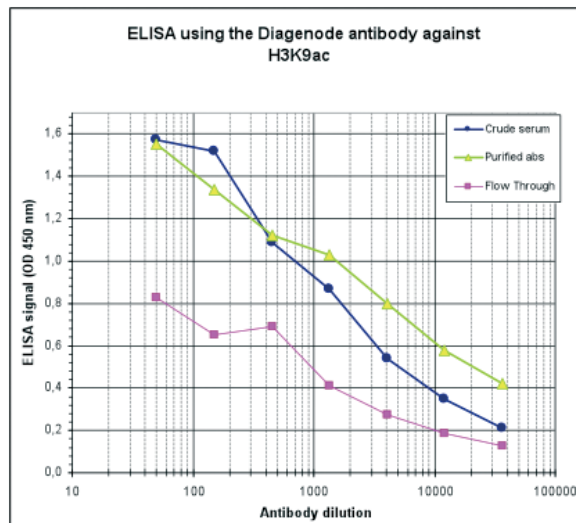


Figure 2

Determination of the antibody titer

To determine the titer of the antibody, an ELISA was performed using a serial dilution of the Diagenode antibody directed against H3K9ac (cat# pAb-004-050) in antigen coated wells.

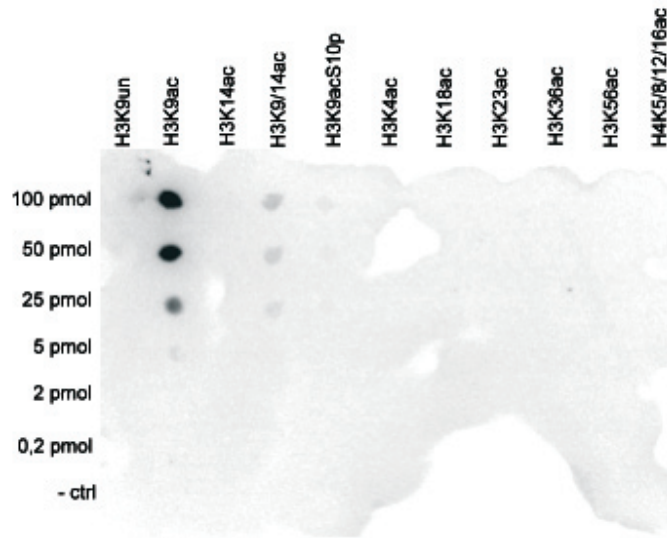


Figure 3

Cross reactivity test using the Diagenode antibody directed against H3K9ac

A Dot Blot analysis was performed to test the cross reactivity of the Diagenode antibody against H3K9ac (cat# pAb-004-050) with peptides containing other histone modifications and the unmodified H3K9 sequence. One hundred to 0.2 pmol of the respective peptides were spotted on a membrane. The antibody was used at a dilution of 1:20,000. Figure 2 shows a high specificity of the antibody for the modification of interest.