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Product datasheet for TA347211

H4-16 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	Dot, ELISA, WB
Recommended Dilution:	ChIP (5 µl/ChIP); ELISA (1:500) ; Dot blotting (1:20,000) ; Western blotting (1:250)
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	The immunogen for anti-H4K8ac antibody: histone H4 containing the acetylated lysine 8 (H4K8ac), using a KLH-conjugated synthetic peptide
Concentration:	lot specific
Purification:	Whole antiserum from rabbit containing 0.05% azide.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	histone cluster 4, H4
Database Link:	NP_778224 Entrez Gene 121504 Human P62805
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. Acetylation of histone H4 is associated with active gene transcription.

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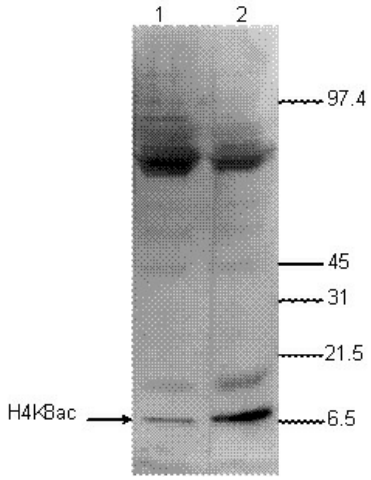
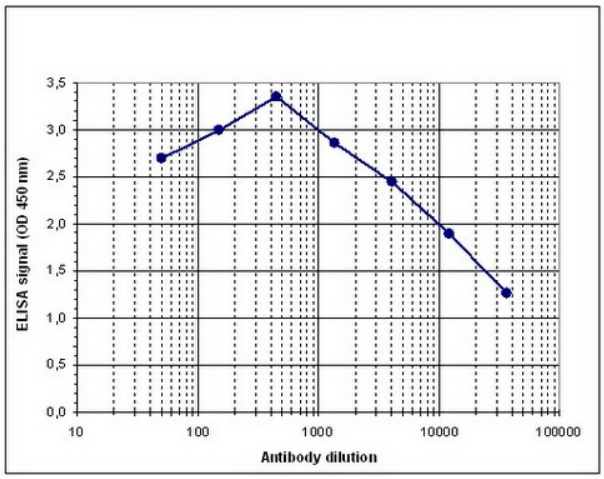
Synonyms: H4; p

Protein Pathways: Systemic lupus erythematosus

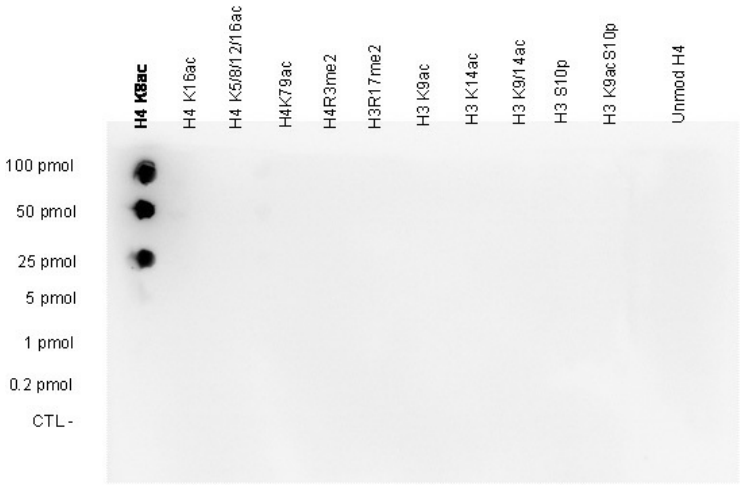
Product images:



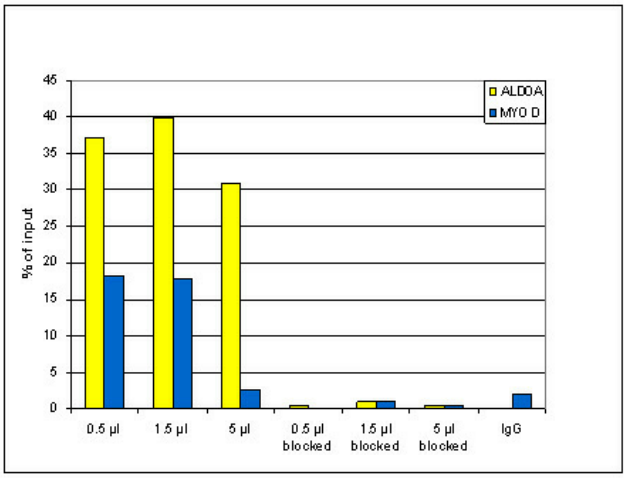
WB using the antibody against H4K8ac diluted 1:250 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the left; the marker (in kDa) is shown on the right. Lane 2 shows the result of the Western analysis with the antibody; lane 1 shows the same analysis after incubation of the antibody with 750 pmol blocking peptide for 1 hour at room temperature.



Determination of the titer To determine the titer, an ELISA was performed using a serial dilution of the antibody against human H4K8ac. The antigen used was a peptide containing the histone modification of interest. By plotting the absorbance against the antibody dilution (Figure 2), the titer of the antibody was estimated to be 1:17, 500.



A Dot Blot analysis was performed to test the cross reactivity of the antibody against H4K8ac 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. Image shows a high specificity of the antibody for the modification of interest.



ChIP assays using human U2OS cells (sheared chromatin from 100,000 cells treated with the deacetylase inhibitor ATRA). A titration of 0.5, 1.5 and 5ul antibody per ChIP was performed after incubation with 5 nM blocking peptide for 1 hr at RT. IgG (5 ug/IP) as negative control. qPCR primers were for ALDOA promoter (fructose-bisphosphate aldolase A) and for the coding region of MYOD (inactive at normal conditions). Image shows the recovery, expressed as a % of input (the relative amount of IP'd DNA compared to input DNA after qPCR).