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Product datasheet for TA347209

H4-16 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	Dot, ELISA, WB
Recommended Dilution:	ChIP (5 - 10 µl/ChIP); ELISA (1:300); Dot blotting (1:20,000); Western blotting (1:750)
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	The immunogen for anti-H4K20me1 antibody: histone H4 containing the monomethylated lysine 20 (H4K20me1), 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.

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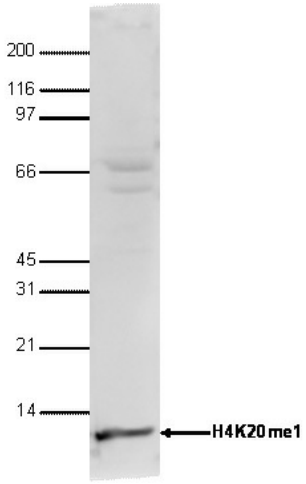
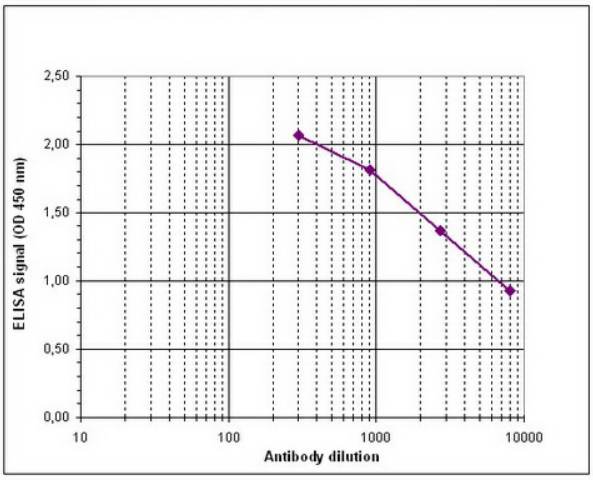
Synonyms: H4; p

Protein Pathways: Systemic lupus erythematosus

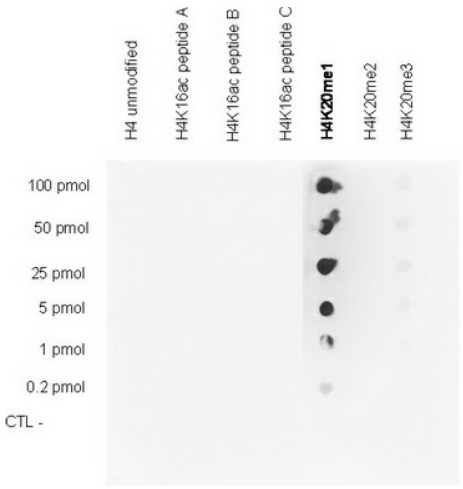
Product images:



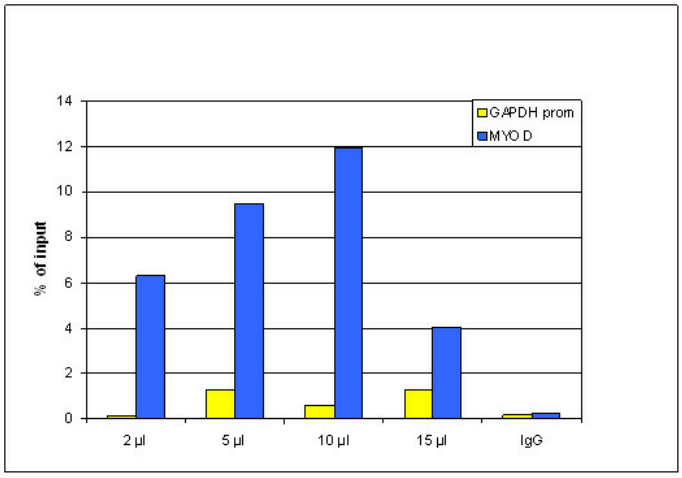
WB using the antibody against H4K20me1 diluted 1:750 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.



Determination of the titer To determine the titer, an ELISA was performed using a serial dilution of the antibody against H4K20me1. 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 1:8,000.



Dot Blot was performed with peptides containing other modifications of histone H4 or the unmodified sequence. Other histone modifications include mono- and dimethylation of the same lysine and acetylation of the nearby lysine 16. To determine the cross reactivity, 0.2 to 100 pmol of peptides were spotted on a membrane. Three different peptides for H4K16ac were used. 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 were performed using human U2OS cells. IgG (5 ug/IP) was used as negative control. qPCR primers were for the GAPDH promoter and for the coding region of MYOD, a gene that is 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 analysis).