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Product datasheet for TA347169

H3FA (HIST1H3A) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	Dot, ELISA, WB
Recommended Dilution:	ChIP (5 ?? 10 µl/ChIP); ELISA (1:500 ?? 1:1,000); Dot blotting (1:100,000); Western blotting (1:1,000)
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	The immunogen for anti-H3K79me1 antibody: histone H3 the monomethylated lysine 79 (H3K79me1), 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 1, H3a
Database Link:	NP_003520 Entrez Gene 8350 Human P68431
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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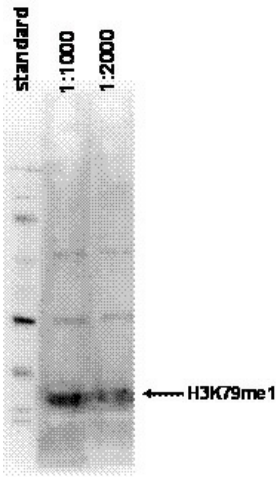
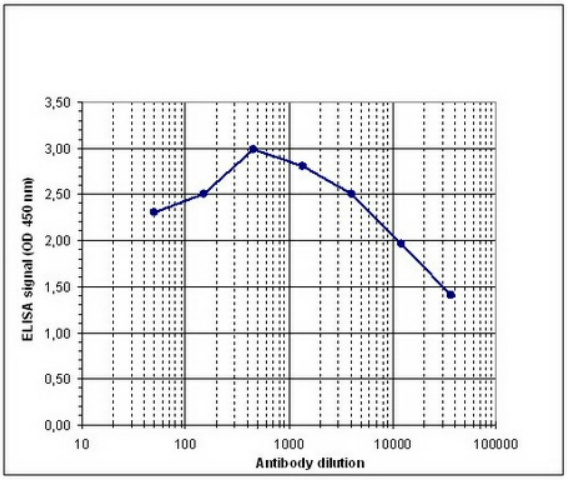
Synonyms: A; H3; H3FA

Protein Pathways: Systemic lupus erythematosus

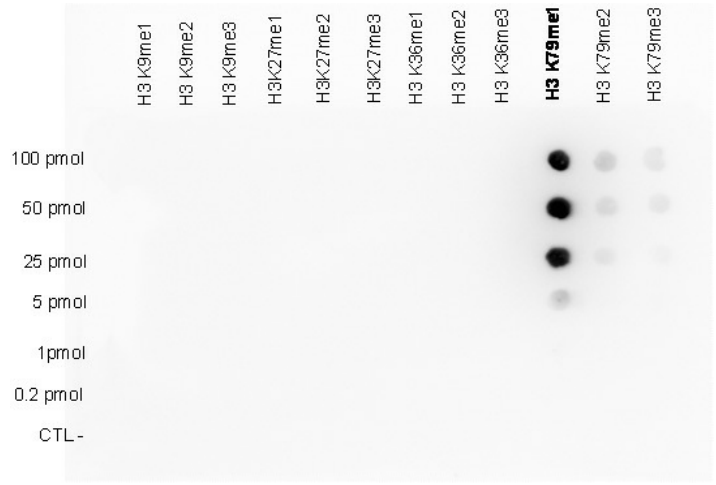
Product images:



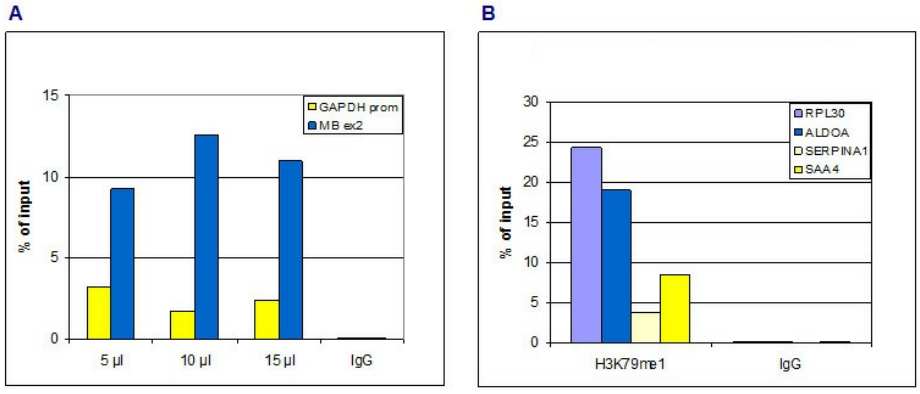
WB was performed on histone extracts from HeLa cells (15 ug) with the abtibody against H3K79me1, diluted 1:1,000 and 1:2000 in TBS-Tween containing 5% skimmed milk. The molecular weight marker (Bio-Rad, broad range biotinylated SDS-PAGE standard) is shown on the left, the location of the protein of interest is indicated on the right.



Determination of the antibody titer To determine the titer of the antibody, an ELISA was performed using a serial dilution of antibody against H3K79me1 in antigen coated wells. 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 1:30,000.



A Dot Blot analysis was performed to test the cross reactivity of the antibody against H3K79me1 with peptides containing other modifications of histone H3. These include di- and trimethylation of the same lysine and mono-, di- and trimethylation of lysine 9, 27 and 36. One hundred to 0.2 pmol of the peptides were spotted on a membrane. The antibody was used at a dilution of 1:100,000. Image shows a high specificity of the antibody for the modification of interest.



ChIP assays were performed using HeLa cells, the antibody against H3K79me1 and optimized PCR primer pairs for qPCR. Chromatin from 1.6 million cells was sheared with the “Shearing ChIP was performed with the “OneDay ChIP experiment. Figure 1B: recovery of RPL30, ALDOA, SERPINA1 and SAA4 using 10 ul of antibody per ChIP experiment.