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Product datasheet for TA347159

H3FA (HIST1H3A) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	Dot, ELISA, WB
Recommended Dilution:	ChIP (1 µl per IP); ELISA (1:100 - 1:500); Dot blotting (1:20,000); Western blotting (1:1,000)
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	The immunogen for anti-H3K4me3 antibody: the region of histone H3 containing the trimethylated lysine 4 (H3K4me3), 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. Methylation of histone H3K4 is associated with activation of gene transcription.

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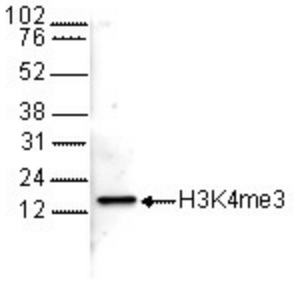
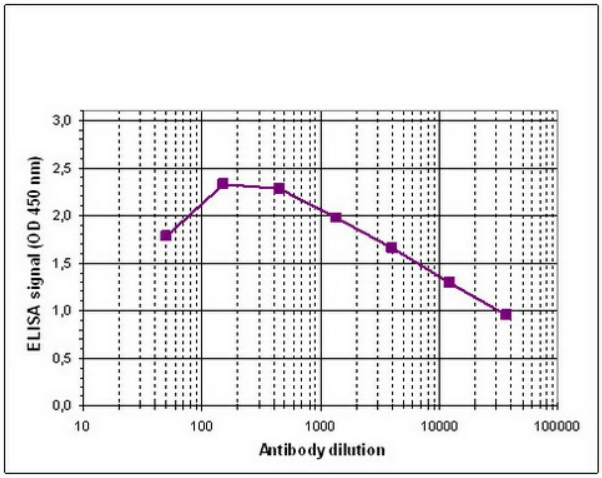
Synonyms: A; H3; H3FA

Protein Pathways: Systemic lupus erythematosus

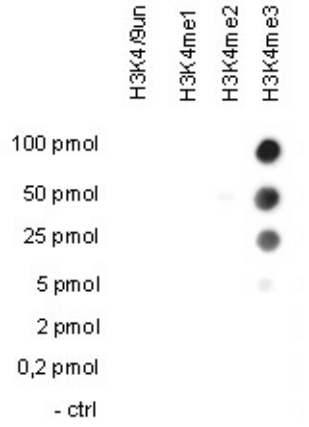
Product images:



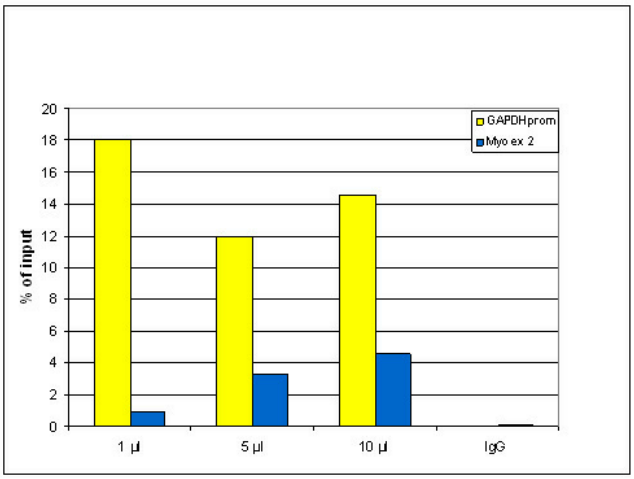
WB using the antibody against H3K4me3 diluted 1:1,000 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.



Determination of the antibody titer To determine the titer, an ELISA was performed using a serial dilution of the antibody against human H3K4me3 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 1:19,000.



A Dot Blot analysis was performed to test the cross reactivity of the antibody against H3K4me3 with peptides containing other H3K4 methylations and the unmodified 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. Image shows a high specificity of the antibody for the modification of interest.



ChIP assays using human U2OS cells: ChIP kit using sheared chromatin from 2 million cells and stringent washing conditions. Titration of 1, 5 and 10 ul ab per ChIP were used (1 ug/IP IgG as negative control). qPCR primers were for the promoter of the constitutively expressed GAPDH gene and for myoglobin exon 2. Image shows the recovery, expressed as a % of input (the relative amount of IP'd DNA compared to input DNA after qPCR): results in accordance with the observation that trimethylation of K4 at histone H3 is associated with the promoters of active genes.