OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA347203

H3FA (HIST1H3A) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	Dot, ELISA, WB
Recommended Dilution:	ChIP/ChIP-seq (1-2ug/ChIP); ELISA (1:500); Dot blotting (1:5,000); Western blotting (1:1,000)
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	The immunogen for anti-H3K64me3 antibody: histone H3 containing the trimethylated lysine 64 (H3K64me3), using a KLH-conjugated synthetic peptide.
Concentration:	lot specific
Purification:	Affinity purified polyclonal antibody in PBS containing 0.05% azide and 0.05% ProClin 300.
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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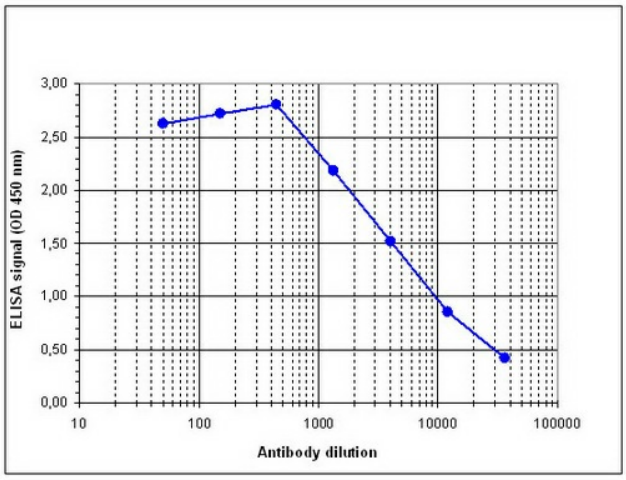
Synonyms: A; H3; H3FA

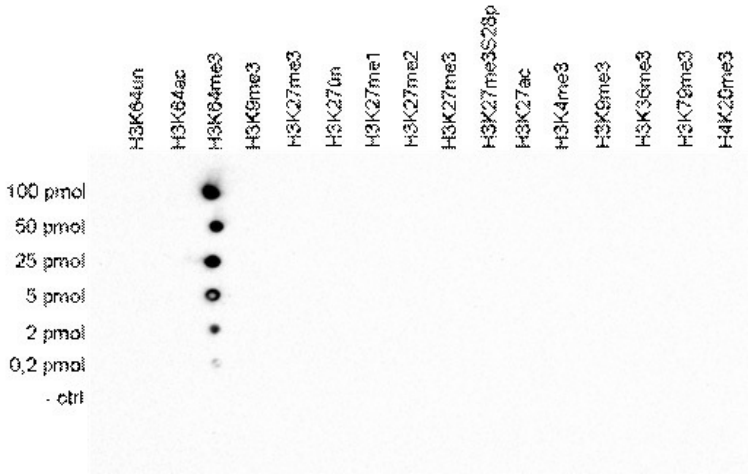
Protein Pathways: Systemic lupus erythematosus

Product images:

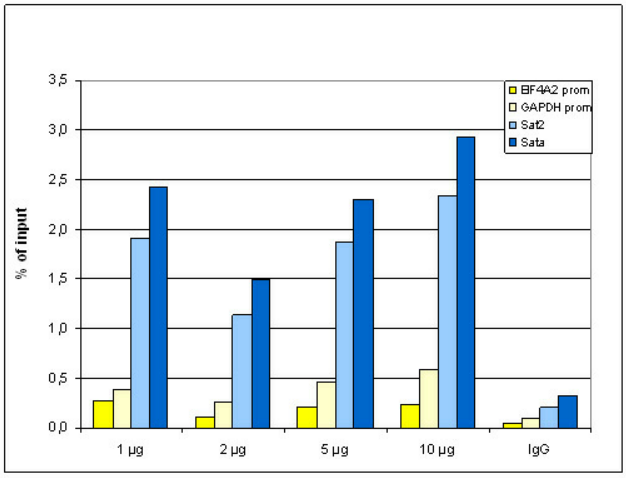
WB was performed on histone extracts (30 ug) from HeLa cells using the antibody against H3K64me3. The antibody was diluted 1:100 in TBS-Tween containing 5% skimmed milk. The marker (in kDa) is shown on the left, the position of the protein is indicated on the right.



Determination of the titer To determine the titer, an ELISA was performed using a serial dilution of the antibody against H3K64me3 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 1:5, 500.



A Dot Blot was performed with peptides containing different modifications of histone H3 and H4 or the unmodified H3K64 sequence. One hundred to 0.2 pmol of peptide containing the respective histone modification were spotted on a membrane. The antibody was used at a dilution of 1:5,000. Image shows a high specificity of the antibody for the modification of interest.



ChIP assays were performed using human K562 cells (sheared chromatin from 1 million cells). Titration of 1, 2, 5, and 10ug antibody per ChIP was analysed. IgG (2 ug/IP) was used as negative control. qPCR primers were for the promoter of active GAPDH and EIF4A2 genes as negative controls, and for the Sat2 and Sata satellite repeatsas positive controls. Image shows the recovery, expressed as a % of input (the relative amount of IP'd DNA compared to input DNA after qPCR).