

Rabbit Acetyl-Histone H4 Polyclonal Antibody | anti-HIST1H4A antibody

Acetyl-Histone H4 (Lys5) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321659	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

Acetyl-Histone H4; Polyclonal Antibody; Acetyl-Histone H4 (Lys5) Antibody; dJ160A22.1; dJ160A22.2; dJ221C16.1; dJ221C16.9; FO108; H4; H4.k; H4/a; H4/b; H4/c; H4/d; H4/e; H4/g; H4/h; H4/l; H4/j; H4/k; H4/m; H4/n; H4/p; H4_HUMAN; H4F2; H4F2iii; H4F2iv; H4FA; H4FB; H4FC; H4FD; H4FE; H4FG; H4FH; H4FI; H4FJ; H4FK; H4FM; H4FN; H4M; HIST1H4A; HIST1H4B; HIST1H4C; HIST1H4D; HIST1H4E; HIST1H4F; HIST1H4H; HIST1H4I; HIST1H4J; HIST1H4K; HIST1H4L; HIST2H4; HIST2H4A; Hist4h4; Histone 1 H4a; Histone 1 H4b; Histone 1 H4c; Histone 1 H4d; Histone 1 H4e; Histone 1 H4f; Histone 1 H4h; Histone 1 H4i; Histone 1 H4j; Histone 1 H4k; Histone 1 H4l; Histone 2 H4a; histone 4 H4; Histone H4; MGC24116; anti-HIST1H4A antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Acetyl-Histone H4 (Lys5) antibody detects endogenous levels of Acetyl-Histone H4 only when phosphorylated at Lys5
Purity/Purification	Immunogen affinity purified
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	103
Applicable Applications for anti-HIST1H4A antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Acetyl-Histone H4 around the phosphorylation site of Lys5
Subcellular Location	Nucleus. Chromosome.
Predicted Cross Reactivity	Pig, Bovine, Chicken, Xenopus
Similarity	Pig (100%), Bovine (100%), Chicken (100%), Xenopus (100%)
Conjugation	Unconjugated
Epitope	Acetyl Lys5
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IF (Immunofluorescence)

AAA321659 staining Hela by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of Acetyl-Histone H4 (Lys5) expression in various lysates



IHC (Immunohistochemistry)

AAA321659 at 1/200 staining human colon cancer tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-HIST1H4A antibody	<p>Description: Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. Two molecules of each of the four core histones (H2A, H2B, H3, and H4) form an octamer, around which approximately 146 bp of DNA is wrapped in repeating units, called nucleosomes.</p> <p>Function: Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling.</p> <p>Subunit Structure: The nucleosome is a histone octamer containing two molecules each of H2A, H2B, H3 and H4 assembled in one H3-H4 heterotetramer and two H2A-H2B heterodimers. The octamer wraps approximately 147 bp of DNA.</p> <p>Post-translational Modifications: Acetylation at Lys-6 (H4K5ac), Lys-9 (H4K8ac), Lys-13 (H4K12ac) and Lys-17 (H4K16ac) occurs in coding regions of the genome but not in heterochromatin. Citrullination at Arg-4 (H4R3ci) by PADI4 impairs methylation. Monomethylation and asymmetric dimethylation at Arg-4 (H4R3me1 and H4R3me2a, respectively) by PRMT1 favors acetylation at Lys-9 (H4K8ac) and Lys-13 (H4K12ac). Demethylation is performed by JMJD6. Symmetric dimethylation on Arg-4 (H4R3me2s) by the PRDM1/PRMT5 complex may play a crucial role in the germ-cell lineage. Monomethylated, dimethylated or trimethylated at Lys-21 (H4K20me1, H4K20me2, H4K20me3). Monomethylation is performed by SET8. Trimethylation is performed by KMT5B and KMT5C and induces gene silencing. Phosphorylated by PAK2 at Ser-48 (H4S47ph). This phosphorylation increases the association of H3.3-H4 with the histone chaperone HIRA, thus promoting nucleosome assembly of H3.3-H4 and inhibiting nucleosome assembly of H3.1-H4. Ubiquitinated by the CUL4-DDB-RBX1 complex in response to ultraviolet irradiation. This may weaken the interaction between histones and DNA and facilitate DNA accessibility to repair proteins. Monoubiquitinated at Lys-92 of histone H4 (H4K91ub1) in response to DNA damage. The exact role of H4K91ub1 in DNA damage response is still unclear but it may function as a licensing signal for additional histone H4 post-translational modifications such as H4 Lys-21 methylation (H4K20me). Sumoylated, which is associated with transcriptional repression. Crotonylation (Kcr) is specifically present in male germ cells and marks testis-specific genes in post-meiotic cells, including X-linked genes that escape sex chromosome inactivation in haploid cells. Crotonylation marks active promoters and enhancers and confers resistance to transcriptional repressors. It is also associated with post-meiotically activated genes on autosomes. Butyrylation of histones marks active promoters and competes with histone acetylation.</p> <p>Similarity: Belongs to the histone H4 family.</p>
References	<p>Hu Q, Chang X, Yan R, Rong C, Yang C, Cheng S, Gu X, Yao H, Hou X, Mo Y, Zhao L, Chen Y, Dinlin X, Wang Q, Fang S; Journal: Med Oncol. (-)Epigallocatechin-3-gallate induces cancer cell apoptosis via acetylation of amyloid precursor protein.</p>

NCBI AND UNIPROT INFORMATION

NCBI GI #	77539758
NCBI GeneID	554313
NCBI Accession #	NP_001029249.1
NCBI GenBank Nucleotide #	NM_001034077.4
UniProt Accession #	P62805; P02304; P02305; Q6DRA9; Q6FGB8; Q6NWP7; A2VCL0
Molecular Weight	Observed: 11 kDa Predicted: 12 kDa
NCBI Official Full Name	histone H4
NCBI Official Synonym Full Names	histone cluster 2 H4 family member b
NCBI Official Symbol	HIST2H4B
NCBI Official Synonym Symbols	H4/o
NCBI Protein Information	histone H4
UniProt Protein Name	Histone H4
UniProt Gene Name	HIST1H4A
UniProt Synonym Gene Names	H4/A; H4FA

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AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
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