Rabbit Histone H4 Polyclonal Antibody | anti-H4 antibody

Histone H4 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329519	**Rabbit**	**Human, Mouse, Rat, Pig, BovinePredicted Reactivity: Chicken (100%), Xenopus (100%)**	**ELISA, Immunocytochemistry, Immunofluorescence, Western Blot**

PRODUCT SYNONYMS

Histone H4; Polyclonal Antibody; Histone H4 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/I; 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; MGC24116; anti-H4 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat, Pig, Bovine Predicted Reactivity: Chicken (100%), Xenopus (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Histone H4 Antibody detects endogenous levels of total Histone H4.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-H4 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Histone H4, corresponding to a region within C-terminal amino acids.
Conjugation	Unconjugated
Fragment	Fab fragment

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. Dimethylation and trimethylation is performed by KMT5B and KMT5C and induces gene silencing (By similarity).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.Glutarylation at Lys-92 (H4K91glu) destabilizes nucleosomes by promoting dissociation of the H2A-H2B dimers from nucleosomes.
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.
Similarity	Belongs to the histone H4 family.
Subcellular Location	Nucleus. Chromosome.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

Application Data
At 25 degree C. Samples were then incubated with primary Ab(At 37 degree C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody.The nuclear counter stain is DAPI(blue).

WB (Western Blot)
Western blot analysis of Histone H4 in lysates of A431, using Histone H4 Antibody(AF4657).

WB (Western Blot)
Western blot analysis of extracts from various samples, using Histone H4 Antibody.Lane 1: Mouse brain, treated with blocking peptide;Lane 2: Mouse brain;Lane 3: Mouse kidney;Lane 4: Mcf7;Lane 5: Myeloma cells.

ADDITIONAL INFORMATION

Related Product Information for anti-H4 antibody	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.

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	11,367 Da
NCBI Official Full Name	histone H4
NCBI Official Synonym Full Names	histone cluster 2, H4b
NCBI Official Symbol	HIST2H4B
NCBI Official Synonym Symbols	H4/o
NCBI Protein Information	histone H4; histone 2, H4b
UniProt Protein Name	Histone H4
UniProt Gene Name	**HIST1H4A**
UniProt Synonym Gene Names	H4/A; H4FA
UniProt Entry Name	H4_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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