Rabbit Histone H4 Polyclonal Antibody | anti-H4 antibody

Phospho-Histone H4 (Tyr89) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329427	**Rabbit**	**Human, Mouse, Rat, Pig, BovinePredicted Reactivity: Chicken (100%), Xenopus (100%)**	**ELISA, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

Histone H4; Polyclonal Antibody; Phospho-Histone H4 (Tyr89) 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	Phospho-Histone H4 (Tyr89) Antibody detects endogenous levels of Histone H4 only when phosphorylated at Tyr89.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
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), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Histone H4 around the phosphorylation site of Tyr89.
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

IHC (Immunohistochemistry)
At 1/100 staining Human pancreatic cancer by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemistry)
At 1/100 staining Mouse liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohistochemisry)
At 1/100 staining Mouse testis tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

IHC (Immunohiostchemistry)
Staining Rat heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

WB (Western Blot)
Western blot analysis of extracts from A431, using Phospho-Histone H4(Tyr89) Antibody. Lane1 was treated with phospho-blocking peptide, Lane2 was treated with non-phospho-blocking peptide.

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.

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