



Rabbit Anti-Histone H4 (Acetyl K12) antibody

SL3746R

Product Name:	Histone H4 (Acetyl K12)
Chinese Name:	乙酰化组蛋白H4抗体
Alias:	Histone H4 (Acetyl-K12); Histone H4 (Acetyl Lys12); Acetyl-Histone H4 (Lys12); H4F2; H4FN; HIST1H4; HIST2H4; HISTH4H4; methyl histone H4; histone H4; H4 HUMAN; Osteogenic growth peptide; OGP.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	11kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised acetylpeptide derived from human Histone H4 around the acetylation site of Lys12:LG(Ac-K)GG
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. Nucleosomes consist of approximately 146 bp of DNA wrapped around a histone octamer composed of pairs of each of the four core

histones (H2A, H2B, H3, and H4). The chromatin fiber is further compacted through the interaction of a linker histone, H1, with the DNA between the nucleosomes to form higher order chromatin structures. This gene is intronless and encodes a member of the histone H4 family. Transcripts from this gene lack polyA tails; instead, they contain a palindromic termination element. [provided by RefSeq, Jul 2008].

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.

Subunit:

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.

Subcellular Location:

Nucleus. Chromosome.

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 SUV420H1 and SUV420H2 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.

Similarity:

Belongs to the histone H4 family.

SWISS:

P62805

Gene ID:

121504

Database links:

[Entrez Gene: 121504](#) Human

[Entrez Gene: 554313](#) Human

[Entrez Gene: 8294](#) Human

[Entrez Gene: 8359](#) Human

[Entrez Gene: 8360](#) Human

[Entrez Gene: 8361](#) Human

[Entrez Gene: 8362](#) Human

[Entrez Gene: 8363](#) Human

[Entrez Gene: 8364](#) Human

[Entrez Gene: 8365](#) Human

[Entrez Gene: 8366](#) Human

[Entrez Gene: 8367](#) Human

[Entrez Gene: 8368](#) Human

[Entrez Gene: 8370](#) Human

[Entrez Gene: 100041230](#) Mouse

[Entrez Gene: 100862646](#) Mouse

[Entrez Gene: 319155](#) Mouse

[Entrez Gene: 319156](#) Mouse
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[Entrez Gene: 320332](#) Mouse
[Entrez Gene: 326619](#) Mouse
[Entrez Gene: 326620](#) Mouse
[Entrez Gene: 69386](#) Mouse
[Entrez Gene: 97122](#) Mouse
[GenBank: NM_003548](#) Human
[Omim: 142750](#) Human
[SwissProt: P84040](#) Fruit fly (*Drosophila melanogaster*)
[SwissProt: P02304](#) Human
[SwissProt: P62805](#) Human
[SwissProt: P02304](#) Mouse
[SwissProt: P62806](#) Mouse
[SwissProt: P02304](#) Rat
[SwissProt: P09322](#) *Schizosaccharomyces pombe*
[Unigene: 21500](#) Fruit fly (*Drosophila melanogaster*)
[Unigene: 29514](#) Fruit fly (*Drosophila melanogaster*)
[Unigene: 29527](#) Fruit fly (*Drosophila melanogaster*)
[Unigene: 30219](#) Fruit fly (*Drosophila melanogaster*)
[Unigene: 30220](#) Fruit fly (*Drosophila melanogaster*)

[Unigene: 30221](#) Fruit fly (*Drosophila melanogaster*)

[Unigene: 30223](#) Fruit fly (*Drosophila melanogaster*)

[Unigene: 30868](#) Fruit fly (*Drosophila melanogaster*)

[Unigene: 30869](#) Fruit fly (*Drosophila melanogaster*)

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[Unigene: 30876](#) Fruit fly (*Drosophila melanogaster*)

[Unigene: 33873](#) Fruit fly (*Drosophila melanogaster*)

[Unigene: 5747](#) Fruit fly (*Drosophila melanogaster*)

[Unigene: 143080](#) Human

[Unigene: 247816](#) Human

[Unigene: 248172](#) Human

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[Unigene: 248179](#) Human

[Unigene: 278483](#) Human

[Unigene: 352191](#) Human

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[Unigene: 377875](#) Mouse

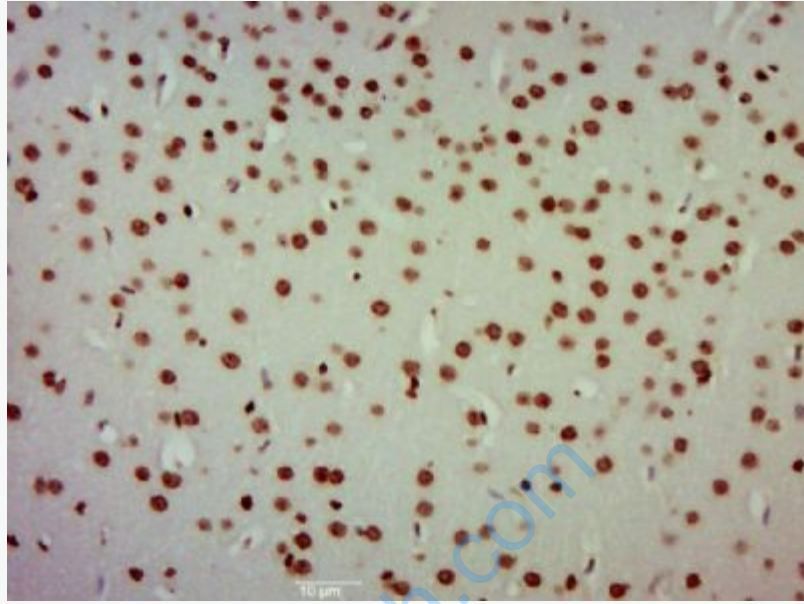
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[Unigene: 486099](#) Mouse

[Unigene: 489077](#) Mouse

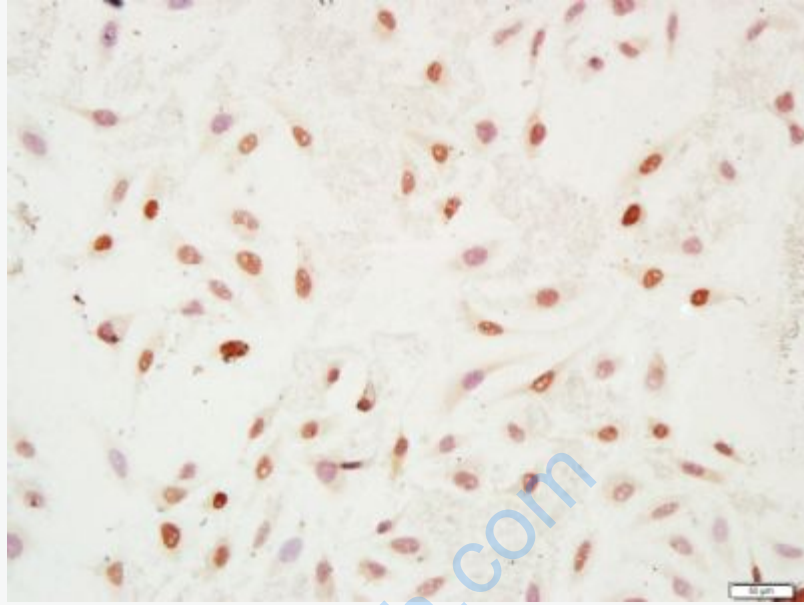
Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.



Picture:

Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Histone H4 (Acetyl K12)) Polyclonal Antibody, Unconjugated (SL3746R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Tissue/cell: HeLa cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Histone H4 (Acetyl K12)) Polyclonal Antibody, Unconjugated (SL3746R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.