



Rabbit Anti-Histone H3 (Acetyl Lys9/14) antibody

SL4316R

Product Name:	Histone H3 (Acetyl Lys9/14)
Chinese Name:	乙酰化组蛋白H3抗体
Alias:	Acetyl-Histone H3 (K9 + K14); Histone H3(Acetyl Lys9 + Lys14); Histone H3(Acetyl-K9); Histone H3 (acetyl K9); H3 histone family member E pseudogene; H3F3; HIST3H3; Histone H3 3 pseudogene; Histone H3; H3S; Histone H3-I/H3-II; Major histone H3; H3F; Histone H3/a; Histone H3/b; Histone H3/c; Histone H3/d; Histone H3/f; Histone H3/h; Histone H3/i; Histone H3/j; Histone H3/k; Histone H3/l; H31 HUMAN
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Rabbit,
Applications:	WB=1:500-2000ELISA=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:	15kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised acetylpeptide derived from human Histone H3 around the acetylation site of Lys9/14:AR(Acetyl-K)STGG(Acetyl-K)AP
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

In eukaryotes, DNA is wrapped around histone octamers to form the basic unit of chromatin structure. The octamer is composed of histones H2A, H2B, H3 and H4, and it associates with approximately 200 base pairs of DNA to form the nucleosome. The association of DNA with histones results in dense packing of chromatin, which restricts proteins involved in gene transcription from binding to DNA. p300 preferentially acetylates Histone H3 at lysines 14 and 18 and Histone H4 at lysines 5 and 8. PCAF in its native form, primarily acetylates Histone H3 at lysine 14 to a monoacetylated form, and less efficiently acetylates Histone H4 at lysine 8. Histone H4 may also be acetylated at lysines 12 and 16, and the involvement of acetylated H4 with Histones H2A, H2B and H3 suggests that acetylated histones may be involved in dynamic chromatin remodeling.

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. H3 is deposited into chromatin exclusively through a DNA replication-coupled pathway that can be associated with either DNA duplication or DNA repair synthesis during meiotic homologous recombination.

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. Interacts with GCN5, whereby H3S10ph increases histone-protein interactions. Interacts with PDD1 and PDD3.

Subcellular Location:

Nucleus. Chromosome. Note=Localizes to both the large, transcriptionally active, somatic macronucleus (MAC) and the small, transcriptionally inert, germ line micronucleus (MIC).

Post-translational modifications:

Phosphorylated to form H3S10ph. H3S10ph promotes subsequent H3K14ac formation by GCN5. H3S10ph is only found in the mitotically dividing MIC, but not in the amitotically dividing MAC. H3S10ph is correlated with chromosome condensation during mitotic or meiotic micronuclear divisions.

Acetylation of histone H3 leads to transcriptional activation. H3K14ac formation by GCN5 is promoted by H3S10ph. H3K9acK14ac is the preferred acetylated form of newly synthesized H3. Acetylation occurs almost exclusively in the MAC.

Methylated to form H3K4me. H3K4me is only found in the transcriptionally active MAC. Methylated to form H3K9me in developing MACs during conjugation, when genome-wide DNA elimination occurs. At this stage, H3K9me specifically occurs on DNA sequences being eliminated (IES), probably targeted by small scan RNAs (scnRNAs) bound to IES, and is required for efficient IES elimination. H3K9me is required for the interaction with the chromodomains of PDD1 and PDD3.

Product Detail:

The full-length protein H3S (slow migrating) is converted to H3F (fast migrating) by proteolytic removal of the first 6 residues. H3F is unique to MIC, and processing seems to occur regularly each generation at a specific point in the cell cycle.

Similarity:

Belongs to the histone H3 family.

SWISS:

P68431

Gene ID:

8290

Database links:

[Entrez Gene: 8290](#)Human

[Entrez Gene: 8350](#)Human

[Entrez Gene: 8351](#)Human

[Entrez Gene: 8352](#)Human

[Entrez Gene: 8353](#)Human

[Entrez Gene: 8354](#)Human

[Entrez Gene: 8355](#)Human

[Entrez Gene: 8356](#)Human

[Entrez Gene: 8357](#)Human

[Entrez Gene: 8358](#)Human

[Entrez Gene: 8968](#)Human

[Entrez Gene: 260423](#)Mouse

[Entrez Gene: 319148](#)Mouse

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[Entrez Gene: 319150](#)Mouse

[Entrez Gene: 319151](#)Mouse

[Entrez Gene: 319152](#)Mouse

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[Entrez Gene: 360198](#)Mouse

[Entrez Gene: 97908](#)Mouse

[Entrez Gene: 100364501](#)Rat

[Entrez Gene: 100365669](#)Rat

[Entrez Gene: 291159](#)Rat

[Entrez Gene: 314977](#)Rat

[Entrez Gene: 364716](#)Rat

[Entrez Gene: 679950](#)Rat

[Entrez Gene: 679994](#)Rat

[Entrez Gene: 680511](#)Rat

[Entrez Gene: 680599](#)Rat

[Entrez Gene: 682330](#)Rat

[Entrez Gene: 691496](#)Rat

[Omim: 601128](#)Human

[Omim: 602810](#)Human

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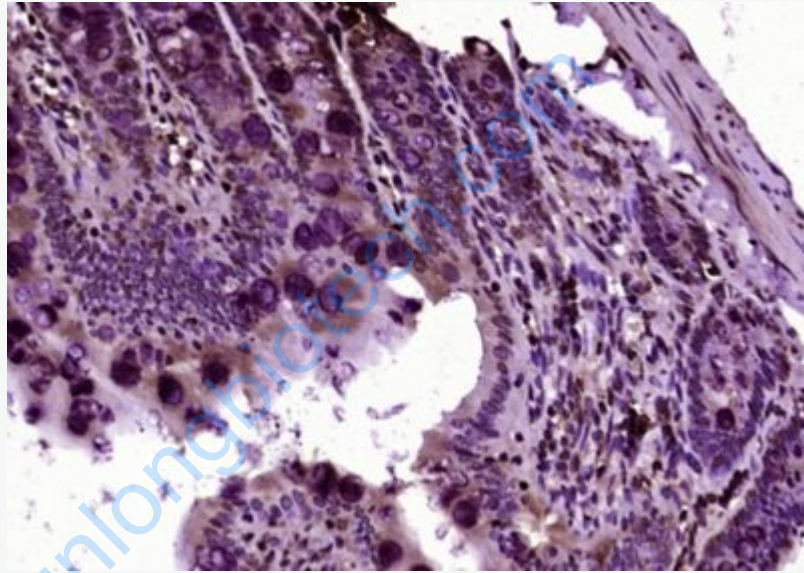
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[SwissProt: P84243](#)Human
[SwissProt: Q16695](#)Human
[SwissProt: Q6NXT2](#)Human
[SwissProt: Q71DI3](#)Human
[SwissProt: P68433](#)Mouse
[SwissProt: P84228](#)Mouse
[SwissProt: Q6LED0](#)Rat
[Unigene: 132854](#)Human
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[Unigene: 397328](#)Mouse

[Unigene: 138090Rat](#)

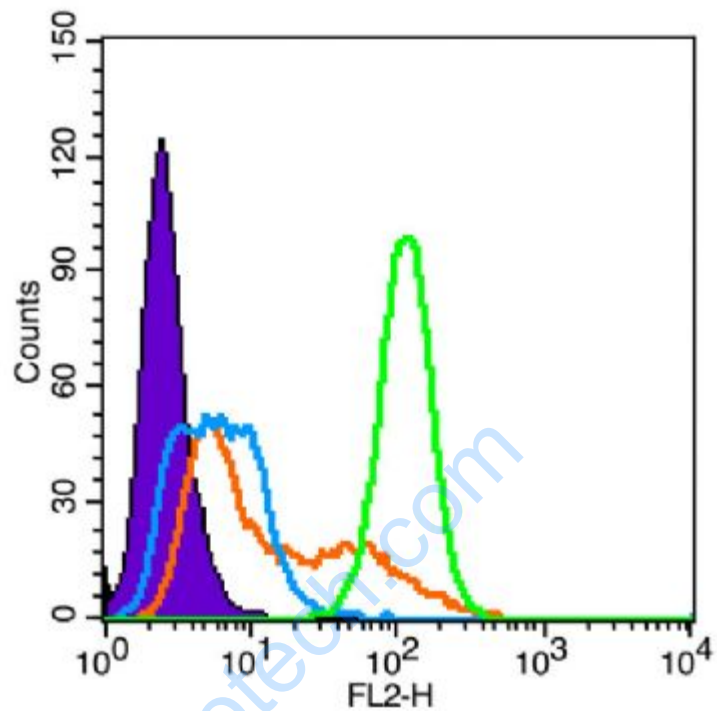
Important Note:

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



Picture:

Paraformaldehyde-fixed, paraffin embedded (Rat colon); 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 H3 (Acetyl Lys9/14)) Polyclonal Antibody, Unconjugated (SL4316R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Blank control (blue line): B16(purple).

Primary Antibody (green line): Rabbit Anti-Histone H3 (Acetyl Lys9/14) antibody (SL4316R)

Dilution: $1\mu\text{g} / 10^6$ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE

Dilution: $1\mu\text{g} / \text{test}$.

Protocol

The cells were fixed with 2% paraformaldehyde (10 min) , then permeabilized with 90% ice-cold methanol for 20 min on ice. The cells were then incubated in 10% goat serum to block non-specific protein-protein interactions for 30min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature.

	<p>The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.</p>
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