



## Rabbit Anti-phospho-Histone H4 (Ser1) antibody

SL17448R

<b>Product Name:</b>	phospho-Histone H4 (Ser1)
<b>Chinese Name:</b>	磷酸化组蛋白H4抗体
<b>Alias:</b>	Histone H4 (phospho-Ser1); Histone H4 (phospho S1); Histone H4 (phospho-Ser2); Histone H4 (phospho S2); p-Histone H4 (phospho S2); H4F2; H4FN; HIST1H4; HIST2H4; HISTH4H4; methyl histone H4; histone H4; H4_HUMAN; Osteogenic growth peptide; OGP.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Chicken,Cow,Saccharomyces cerevisiae
<b>Applications:</b>	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.
<b>Molecular weight:</b>	11kDa
<b>Cellular localization:</b>	The nucleus
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthesised phosphopeptide derived from human Histone H4 around the phosphorylation site of Ser1:(p-S)GR
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	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.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	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:**

Histone proteins H3, H4, H2A, and H2B function as building blocks to package eukaryotic DNA into repeating nucleosome units that are folded in higher order chromatin fibers. The nucleosome is composed of an octamer containing a H3/H4 tetramer and two H2A/H2B dimers, surrounded by approximately 146 base pairs of DNA. A diverse and elaborate array of post-translational modifications including acetylation, phosphorylation, methylation, ubiquitination, and ADP-ribosylation occurs on the N-terminal tail domains of histones. Modification results in remodeling of the nucleosome structure into an open conformation more accessible to transcription complexes.

**Subcellular Location:**

Nuclear.

**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:**

P02304

**Gene ID:**

8370

**Database links:**

[Entrez Gene: 121504](#) Human

[Entrez Gene: 8370](#) Human

[GenBank: NM\\_003548](#) Human

[Omim: 142750](#) Human

[SwissProt: P02304](#) Human

[SwissProt: P02309](#) *Saccharomyces cerevisiae*

[Unigene: 352191](#) Human

**Important Note:**

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