SunLong Biotech Co.,LTD
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[Marker Primary Antibody]

Rabbit Anti-Histone H3 (acetyl K9)/HRP Conjugated antibody

Catalog Number: SL3776R-HRP

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-Histone H3 (acetyl K9)/HRP
Immunogen:	KLH conjugated Synthesised acetylpeptide derived from human Histone H3 around the acetylation site of Lys9
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
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 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Mouse,Rat(predicted:Pig,Cow,Rabbit,Fruit Fly)
Background:	background: Modulation of the chromatin structure plays an important role in the regulation of transcription in eukaryotes. The nucleosome, made up of four core histone proteins (H2A, H2B, H3 and H4), is the primary building block of chromatin. The N-terminal tail of core histones undergoes different posttranslational modifications including acetylation, phosphorylation and methylation. These modifications occur in response to cell signal stimuli and have a direct effect on gene expression. In most species, the histone H2B is primarily acetylated at lysines 5, 12, 15 and 20. Histone H3 is primarily acetylated at lysines 9, 14, 18 and 23. Acetylation at lysine 9 appears to have a dominant role in histone deposition and chromatin assembly in some organisms. Phosphorylation at Ser10 of histone H3 is tightly correlated with chromosome condensation during both mitosis and meiosis.

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

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	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. 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. **Database links:**

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	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 **Entrez Gene:** 319149 Mouse **Entrez Gene:** 319150 Mouse **Entrez Gene:** 319151 Mouse **Entrez Gene:** 319152 Mouse **Entrez Gene:** 319153 Mouse **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 Omim: 602811 Human Omim: 602812 Human Omim: 602813 Human Omim: 602814 Human Omim: 602815 Human Omim: 602816 Human

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	Omim: 602817 Human Omim: 602818 Human Omim: 602819 Human **SwissProt:** P68431 Human **SwissProt:** P84243 Human **SwissProt:** Q16695 Human **SwissProt:** Q6NXT2 Human **SwissProt:** Q71DI3 Human **SwissProt:** P68433 Mouse **SwissProt:** P84228 Mouse **SwissProt:** Q6LED0 Rat **Unigene:** 132854 Human **Unigene:** 247813 Human **Unigene:** 247814 Human **Unigene:** 248176 Human **Unigene:** 443021 Human **Unigene:** 484990 Human **Unigene:** 532144 Human **Unigene:** 533292 Human **Unigene:** 546315 Human **Unigene:** 586261 Human **Unigene:** 591778 Human **Unigene:** 221301 Mouse **Unigene:** 261657 Mouse **Unigene:** 377874 Mouse **Unigene:** 390558 Mouse **Unigene:** 397328 Mouse **Unigene:** 138090 Rat Important **Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.