



Rabbit Anti-Histone H3 (Nuclear Loading Control)antibody

SL0349R

Product Name Histone H3 (Nuclear Loading Control)

Chinese Name 组蛋白 H3 (核内参) 抗体

Alias H3 histone family member E pseudogene; H3 histone family, member A; H3/A; H31_HUMAN; H3F3; H3FA; Hist1h3a; HIST1H3B; HIST1H3C; HIST1H3D; HIST1H3E; HIST1H3F; HIST1H3G; HIST1H3H; HIST1H3I; HIST1H3J; HIST3H3; histone 1, H3a; Histone cluster 1, H3a; Histone H3 3 pseudogene; Histone H3.1; 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; H3.1; H3/d; H3C1; H3C10; H3C11; H3C12; H3C2; H3C3; H3C4; H3C7; H3C8; H3FD;

Product Type Internal reference anti

Research Area Chromatin and nuclear signals Epigenetics

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human,Mouse,Rat(predicted:Fruit Fly,Rabbit,Cow,Pig)
WB=1:5000-50000,IHC-P=1:500-2000,IHC-F=1:500-2000,IF=1:500-2000,Flow-Cyt=1 μ g/Test
(Paraffin sections need antigen repair)

Applications not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 15kDa

Cellular localization The nucleus

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human Histone H3: 71-136/136

Lsotype IgG

Purification affinity purified by Protein A

Buffer Human,Mouse,Rat(predicted:Fruit Fly,Rabbit,Cow,Pig)1M TBS(pH7.4) with 1% BSA,



Solution	Human,Mouse,Rat(predicted:Fruit Fly,Rabbit,Cow,Pig)3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed

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.

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.

Product Detail**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.

SWISS:

P68431

Gene ID:

8350

Database links:

[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

[SwissProt: P68431](#) Human

[SwissProt: P84243](#) Human

[SwissProt: Q16695](#) Human

[SwissProt: Q6NXT2](#) Human

[SwissProt: Q71DI3](#) Human

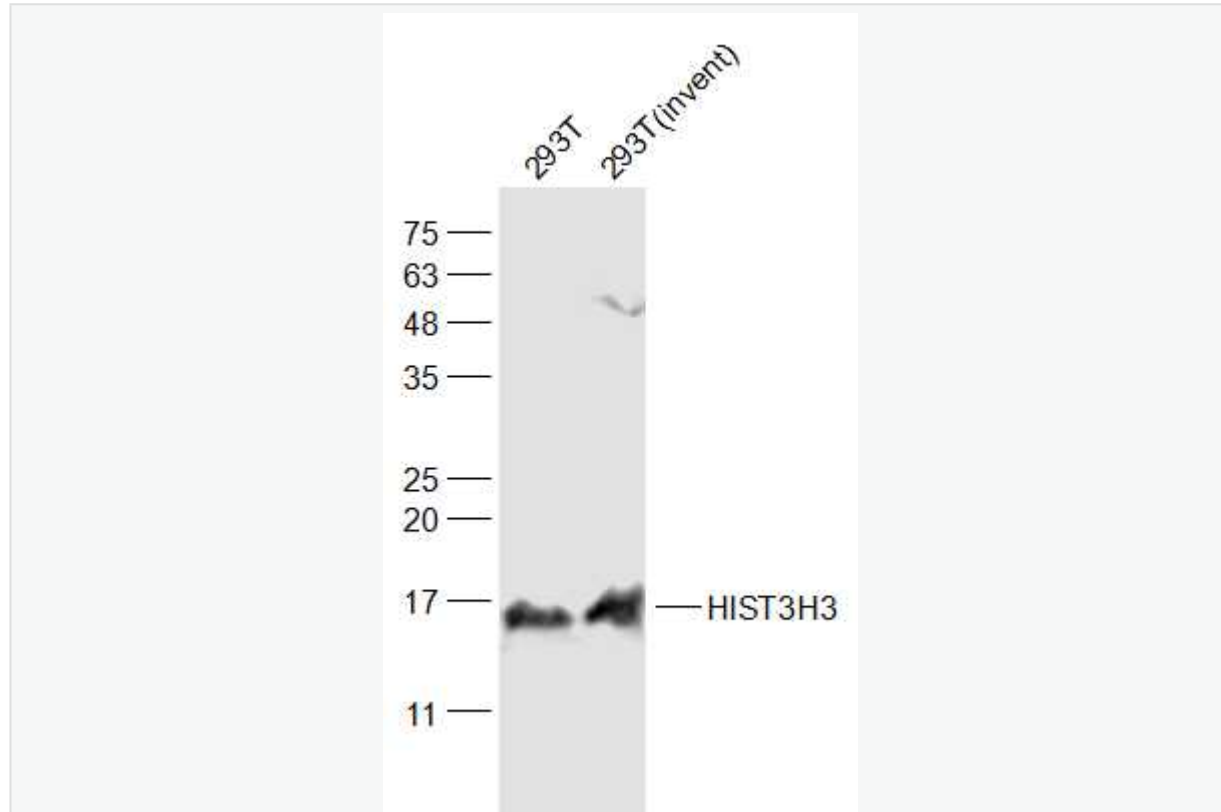
[SwissProt: P68433](#) Mouse

[SwissProt: P84228](#) Mouse

[SwissProt: Q6LED0](#) Rat

组蛋白的基因非常保守，在亲缘关系较远的种属中，四种组蛋白(H2A、H2A、H3、H4)氨基酸序列都非常相似，如海胆组织 H3 的氨基酸序列与来自小牛胸腺的 H3 的氨基酸序列间只有一个氨基酸的差异，小牛胸腺的 H3 的氨基酸序列与豌豆的 H3 也很相似。组蛋白是 The nucleus 内的一种碱性核蛋白，抗组蛋白抗体即是以组蛋白为靶抗原的一种自身，是抗核抗体的一种。分子量：16-18KDa。主要与药物性红斑狼疮、系统性红斑狼疮、类风湿关节炎有关。

**Product
Picture**



Sample:

293T(Human) Cell Lysate at 30 ug

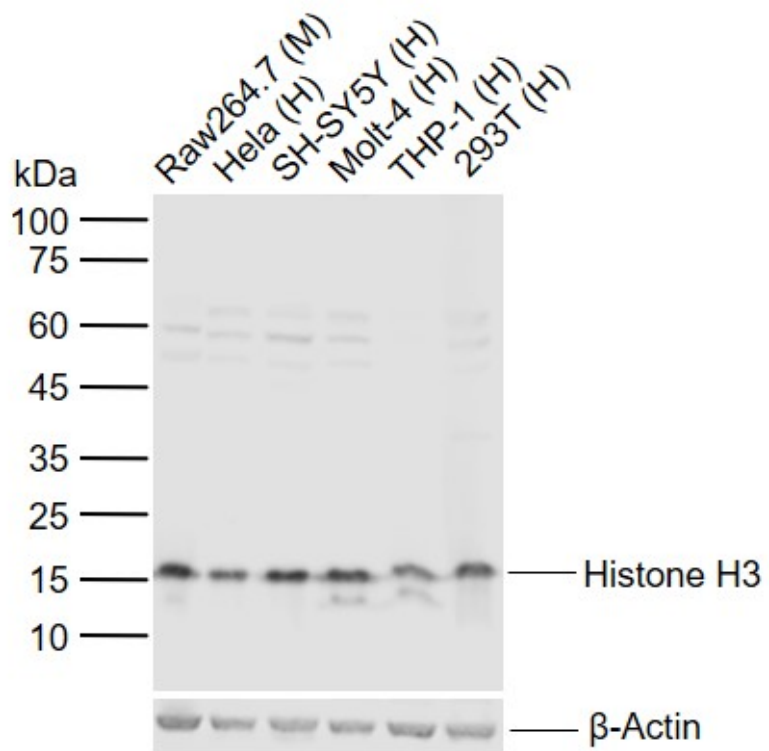
293T(invent)(Human) Cell Lysate at 30 ug

Primary: Anti-HIST3H3 (SL0349R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 15 kD

Observed band size: 15 kD



Sample:

Lane 1: Mouse Raw264.7 cell lysates

Lane 2: Human Hela cell lysates

Lane 3: Human SH-SY5Y cell lysates

Lane 4: Human Molt-4 cell lysates

Lane 5: Human THP-1 cell lysates

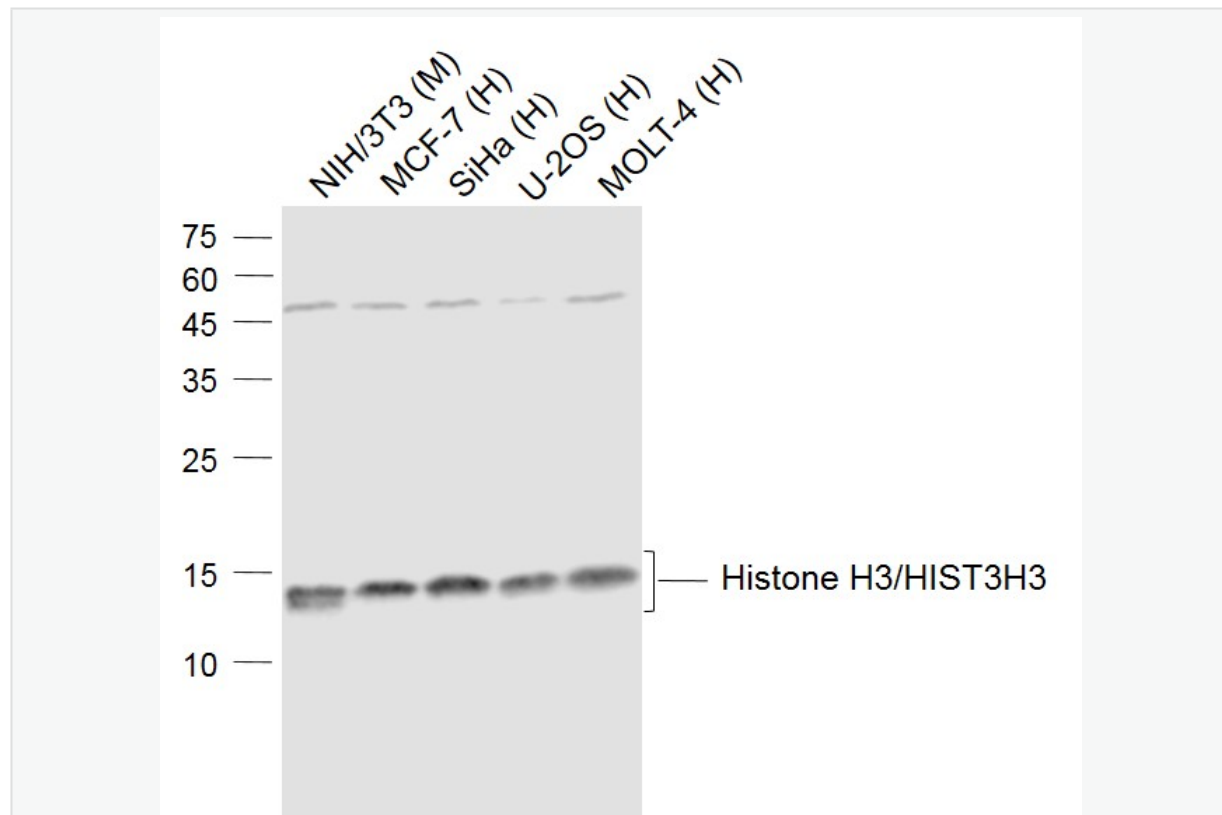
Lane 6: Human 293T cell lysates

Primary: Anti- Histone H3 (SL0349R) at 1/50000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 15 kDa

Observed band size: 15 kDa



Sample:

Lane 1: NIH/3T3(Mouse) Cell Lysate at 30 ug

Lane 2: MCF-7 (Human) Cell Lysate at 30 ug



Lane 3: SiHa (Human) Cell Lysate at 30 ug

Lane 4: U-2OS (Human) Cell Lysate at 30 ug

Lane 5: MOLT-4 (Human) Cell Lysate at 30 ug

Primary: Anti-Histone H3'HIST3H3 (SL0349R) at 1/1000 dilution

Secon