



Rabbit Anti-Histone H3 (Di Methyl K4) antibody

SL3770R

Product Name:	Histone H3 (Di Methyl K4)
Chinese Name:	二甲基化组蛋白H3K4抗体
Alias:	Histone H3(Di Methyl Lys4); Di methyl Histone H3(Lys4); Di methyl Histone H3(K4); H3 histone family member E pseudogene; H3F3; HIST3H3; Histone H3 3 pseudogene; H31_TETTH; 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; H3K4me2.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Pig,Cow,Rabbit,Fruit Fly,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=0.2μg /TestICC=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 methylpeptide derived from human Histone H3 around the methylation site of Lys4:RT(Di Methyl-K)QT
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:	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.

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:

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

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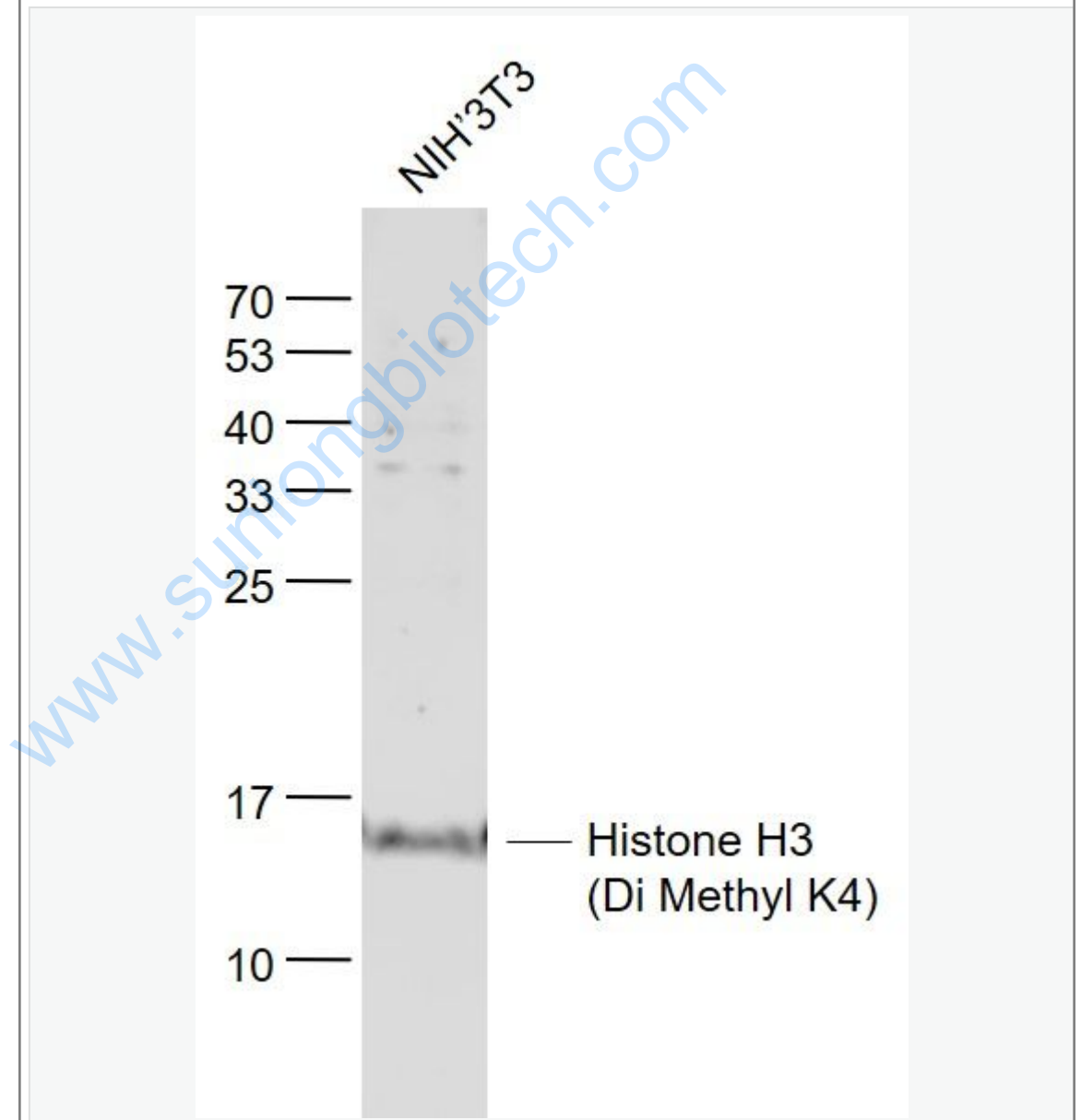
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[Unigene: 377874](#)Mouse
[Unigene: 390558](#)Mouse
[Unigene: 397328](#)Mouse

[Unigene: 138090](#)Rat

Important Note:

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

Picture:



Sample:

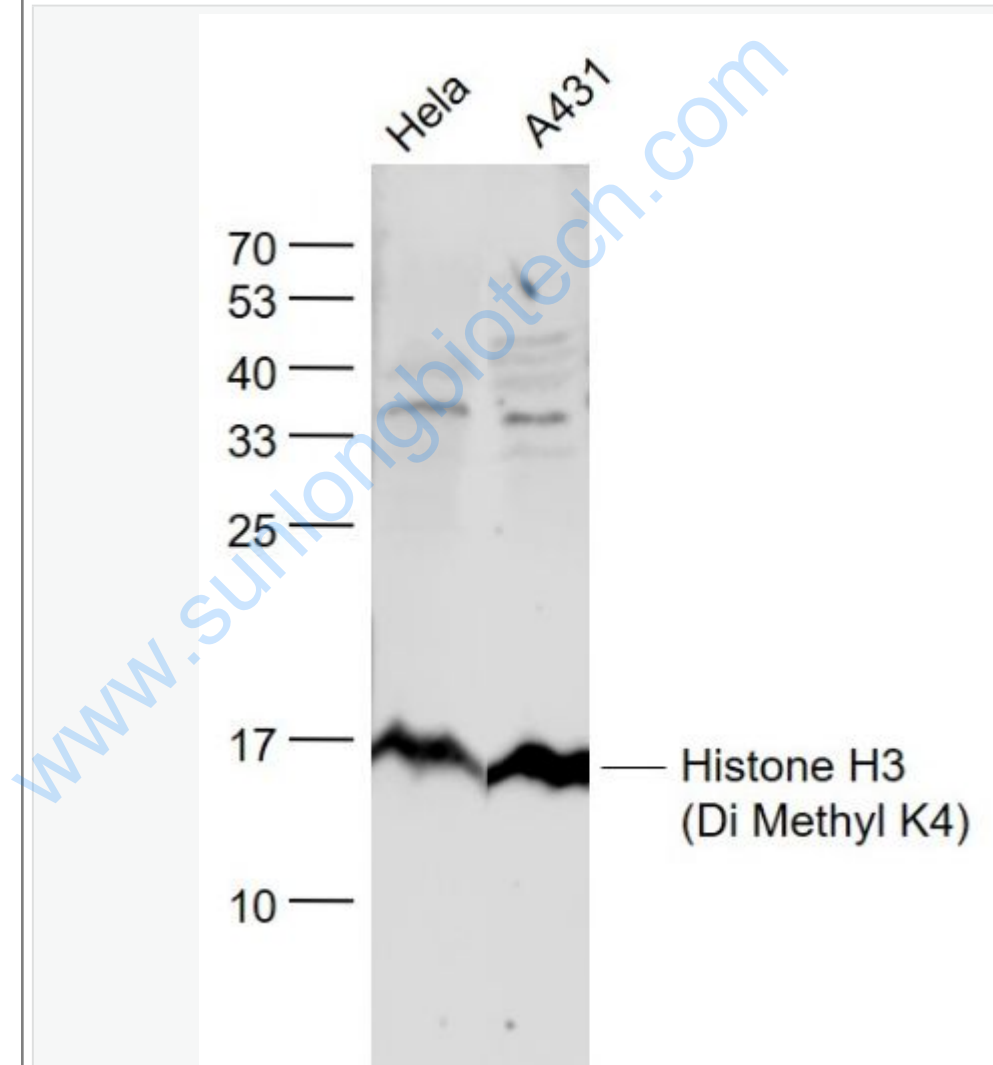
NIH/3T3(Mouse) Cell Lysate at 30 ug

Primary: Anti- Histone H3 (Di Methyl K4) (SL3770R) 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:

HeLa(Human) Cell Lysate at 30 ug

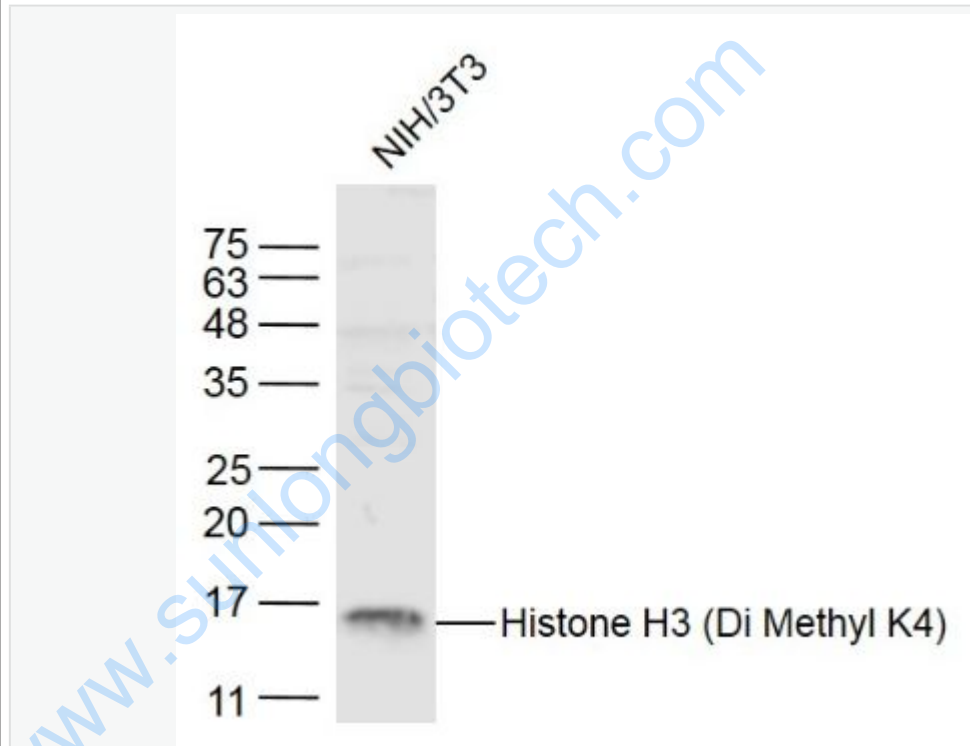
A431(Human) Cell Lysate at 30 ug

Primary: Anti- Histone H3 (Di Methyl K4) (SL3770R) 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:

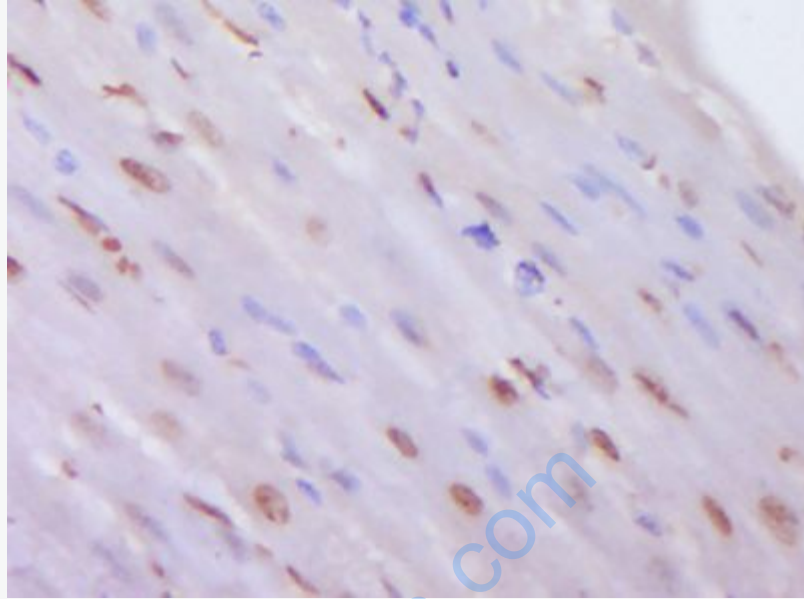
NIH/3T3(Mouse) Cell Lysate at 40 ug

Primary: Anti-Histone H3 (Di Methyl K4) (SL3770R) at 1/300 dilution

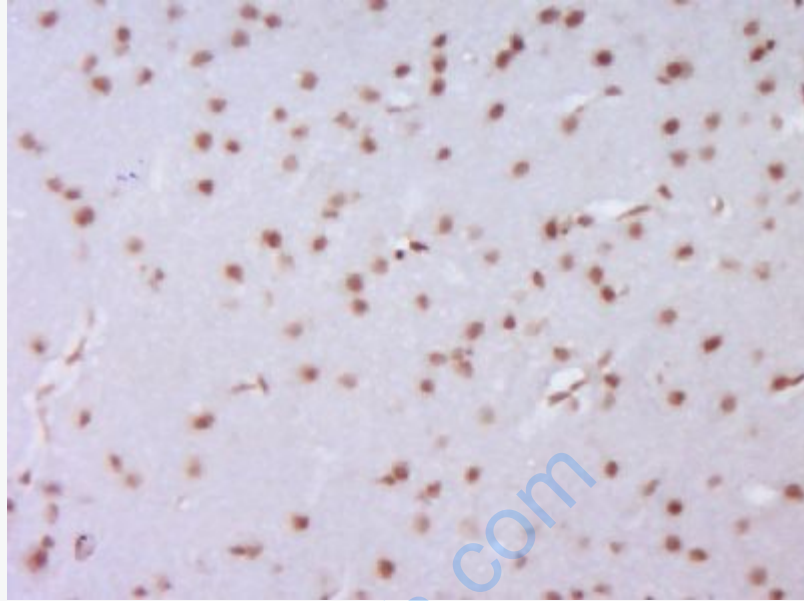
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 15 kD

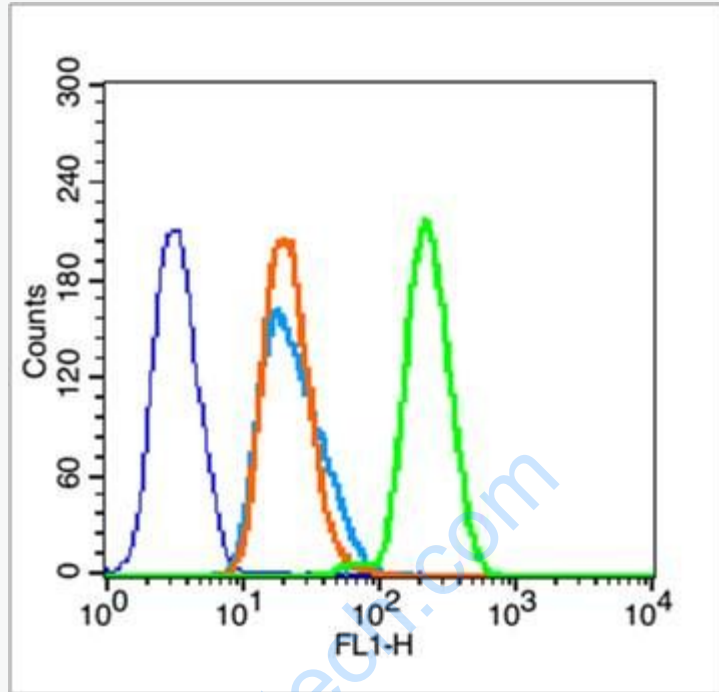
Observed band size: 15 kD



Paraformaldehyde-fixed, paraffin embedded (Rat heart); 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 (Di Methyl K4)) Polyclonal Antibody, Unconjugated (SL3770R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



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 H3 (Di Methyl K4)) Polyclonal Antibody, Unconjugated (SL3770R) 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): HeLa (fixed with 70% ethanol (Overnight at 4°C) and then permeabilized with 90% ice-cold methanol for 30 min on ice).

Primary Antibody (green line): Rabbit Anti-Histone H3 (Di Methyl K4) antibody (SL3770R), Dilution: 0.2µg /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-FITC, Dilution: 1µg /test.