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DiMethyl-Histone H3-K4 Rabbit pAb

Catalog No.: A2356SP **29 Publications**

Basic Information

Observed MW
17 kDa

Calculated MW
15 kDa

Category
Primary antibody

Applications
WB,IP,IF/ICC,IHC-P,DB,ChIP,ChIP-seq,CUT&Tag,ELISA

Cross-Reactivity
Human, Mouse, Rat, Other (Wide Range Predicted)

Background

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 replication-dependent histone that is a member of the histone H3 family. Transcripts from this gene lack polyA tails; instead, they contain a palindromic termination element. This gene is located separately from the other H3 genes that are in the histone gene cluster on chromosome 6p22-p21.3.

Recommended Dilutions

WB	1:1000 - 1:3000
IP	0.5 μg - 5 μg antibody for 400 μg - 600 μg extracts of whole cells
IF/ICC	1:200 - 1:1000
IHC-P	1:2000 - 1:8000
DB	1:5000 - 1:10000
ChIP	5 μg antibody for 5 μg - 10 μg of Chromatin
ChIP-seq	5 μg antibody for 10 μg of Chromatin
CUT&Tag	10^5 cells /1 μg
ELISA	Recommended starting concentration is 1 μg/mL. Please optimize the concentration based on your specific assay

Immunogen Information

Gene ID
8290/8350

Swiss Prot
Q16695/P68431

Immunogen
Synthetic peptide. This information is considered to be commercially sensitive.

Synonyms
H3t; H3.4; H3/g; H3FT; H3C16; HIST3H3; DiMethyl-Histone H3-K4

Product Information

Source
Rabbit

Isotype
IgG

Purification
Affinity purification

Storage
Store at -20℃. Avoid freeze / thaw cycles.
Buffer: PBS, pH 7.3, containing 50% glycerol. Preserved with Proclin300 or sodium azide. May contain 0.05% BSA as specified on the Certificate of Analysis.

requirements.For high-ratio antibody dilutions (≥1:10000)，a sequential dilution

Contact

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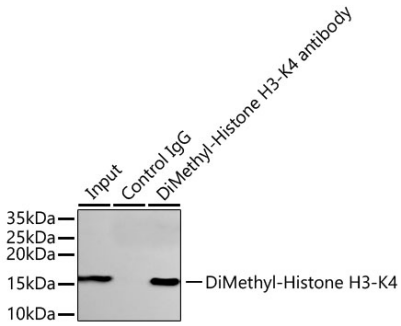
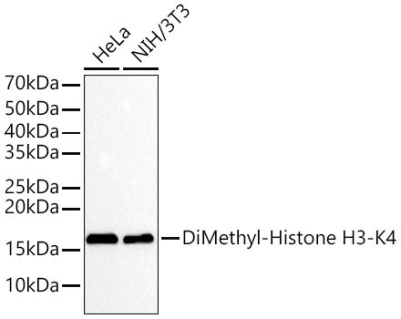
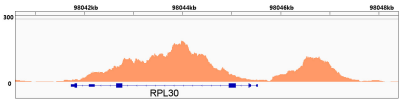
Validation Data



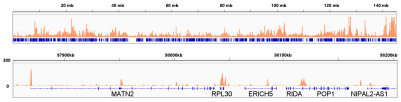
Immunoprecipitation of DiMethyl-Histone H3-K4 from 600 µg extracts of 293F cells was performed using 5 µg of DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP). Rabbit Control IgG (AC005) was used to precipitate the Control IgG sample. IP samples were eluted with 1x reducing Laemmli Buffer. The Input lane represents 10% of the total input. Western blot analysis of immunoprecipitates was conducted using DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) at a dilution of 1:5000.



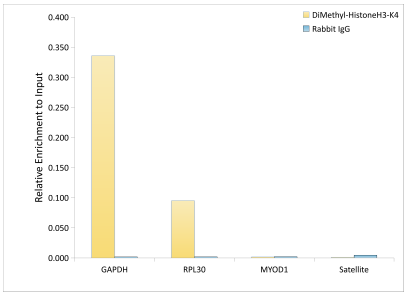
Western blot analysis of various lysates using DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) at 1:3000 dilution incubated overnight at 4℃.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 60 s.



Chromatin immunoprecipitation was performed with 10 µg of cross-linked chromatin from using 5 µg of DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP). DNA libraries were prepared using Scale ssDNA-seq Lib Prep Kit for Illumina V2 (RK20228). The ChIP sequencing results indicate the enrichment pattern of DiMethyl-Histone H3-K4 in the representative genomic region surrounding RPL30 gene.

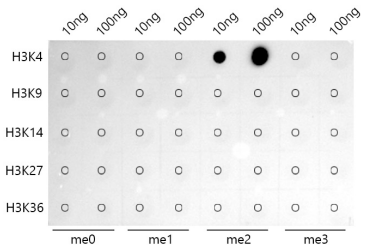


Chromatin immunoprecipitation was performed with 10 µg of cross-linked chromatin from HeLa using 5 µg of DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP). DNA libraries were prepared using Scale ssDNA-seq Lib Prep Kit for Illumina V2 (RK20228). The ChIP sequencing results indicate the enrichment pattern of DiMethyl-Histone H3-K4 across chromosome 8 (upper panel) and the genomic region encompassing , a representative gene enriched in DiMethyl-Histone H3-K4 (lower panel).

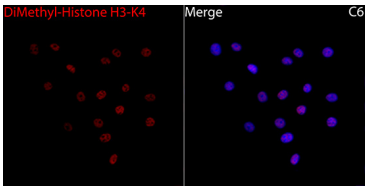


Chromatin immunoprecipitation was performed with 10 µg of cross-linked chromatin from HCT 116 cells, using 5 µg of DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) and Rabbit IgG isotype control (AC042). The enrichment of immunoprecipitated DNA at different genomic loci was examined by quantitative PCR. The histogram compares the ratio of the immunoprecipitated DNA to the input at given loci.

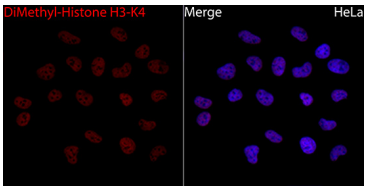
Validation Data



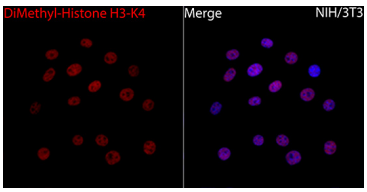
Dot-blot analysis of all sorts of peptides using DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) at 1:10000 dilution.



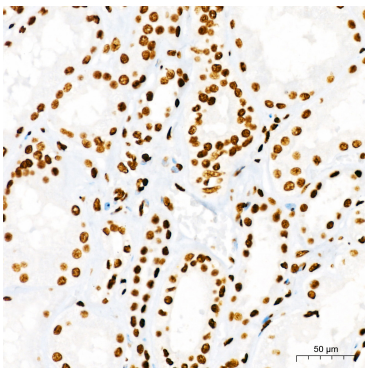
Immunofluorescence analysis of C6 cells using DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) at a dilution of 1:200 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) (AS007) at 1:500 dilution. Blue: DAPI for nuclear staining.



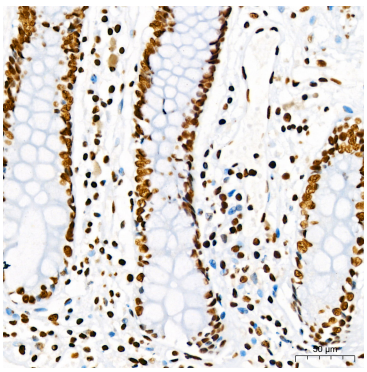
Immunofluorescence analysis of HeLa cells using DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) at a dilution of 1:200 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) (AS007) at 1:500 dilution. Blue: DAPI for nuclear staining.



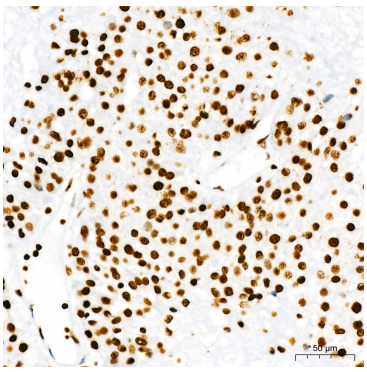
Immunofluorescence analysis of NIH/3T3 cells using DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) at a dilution of 1:200 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) (AS007) at 1:500 dilution. Blue: DAPI for nuclear staining.



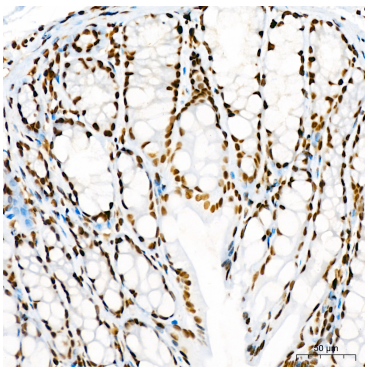
Immunohistochemistry analysis of paraffin-embedded Human kidney tissue using DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) at a dilution of 1:3000 (40x lens). High pressure antigen retrieval performed with 0.01M Citrate Buffer (pH 6.0) prior to IHC staining.



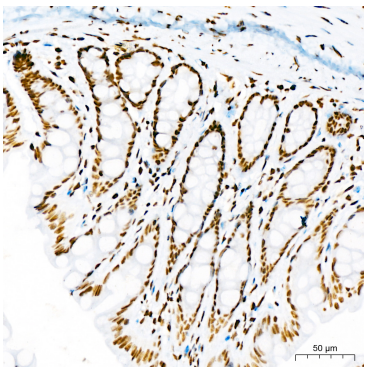
Immunohistochemistry analysis of paraffin-embedded Human colon tissue using DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) at a dilution of 1:3000 (40x lens). High pressure antigen retrieval performed with 0.01M Citrate Buffer (pH 6.0) prior to IHC staining.



Immunohistochemistry analysis of paraffin-embedded Human liver cancer tissue using DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) at a dilution of 1:3000 (40x lens). High pressure antigen retrieval performed with 0.01M Citrate Buffer (pH 6.0) prior to IHC staining.

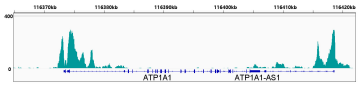


Immunohistochemistry analysis of paraffin-embedded Mouse colon tissue using DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) at a dilution of 1:3000 (40x lens). High pressure antigen retrieval performed with 0.01M Citrate Buffer (pH 6.0) prior to IHC staining.

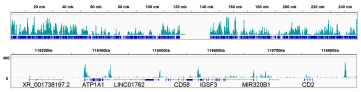


Immunohistochemistry analysis of paraffin-embedded Rat colon tissue using DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP) at a dilution of 1:3000 (40x lens). High pressure antigen retrieval performed with 0.01M Citrate Buffer (pH 6.0) prior to IHC staining.

Validation Data



CUT&Tag was performed using the CUT&Tag Assay Kit (pAG-Tn5) for Illumina (RK20265) from 10^5 HeLa with 1 µg of DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP), followed by incubation with (). The results denote the enrichment pattern of around gene.



CUT&Tag was performed using the CUT&Tag Assay Kit (pAG-Tn5) for Illumina (RK20265) from 10^5 HeLa with 1 µg of DiMethyl-Histone H3-K4 Rabbit pAb (A2356SP), followed by incubation with Goat Anti-Rabbit IgG(H+L)(AS070). The CUT&Tag results denote the enrichment pattern of DiMethyl-Histone H3-K4 across chromosome 1 (upper panel) and the genomic region encompassing ATP1A1, a representative gene enriched in DiMethyl-Histone H3-K4 (lower panel).