

# MonoMethyl-Histone H3-K4 Rabbit mAb

Catalog No.: A22078 **Recombinant**

## Basic Information

### Observed MW

17kDa

### Calculated MW

16kDa

### Category

Primary antibody

### Applications

WB,DB,IF/ICC,ELISA,CUT&Tag

### Cross-Reactivity

Human, Mouse, Rat, Other (Wide Range Predicted)

### CloneNo number

ARC54646

## Recommended Dilutions

**WB** 1:2000 - 1:20000

**DB** 1:1000 - 1:5000

**IF/ICC** 1:100 - 1:500


**ELISA** Recommended starting concentration is 1 µg/mL. Please optimize the concentration based on your specific assay requirements.

**CUT&Tag** 10<sup>5</sup> cells /1 µg

## Contact

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## 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.

## Immunogen Information

### Gene ID

8290/8350

### Swiss Prot

Q16695/P68431

### Immunogen

A synthetic monomethylated peptide around K4 of human Histone H3 (NP\_003520.1).

### Synonyms

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

## Product Information

### Source

Rabbit

### Isotype

IgG

### Purification

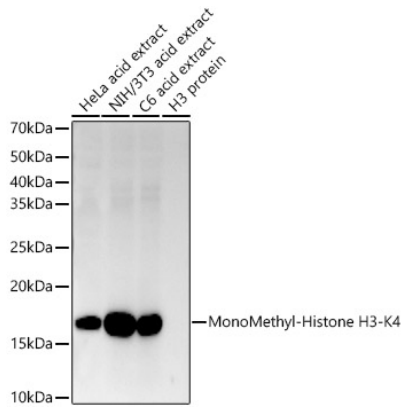
Affinity purification

### Storage

Store at -20°C. Avoid freeze / thaw cycles.

Buffer: PBS with 0.05% proclin300,0.05% BSA,50% glycerol,pH7.3.

## Validation Data



Western blot analysis of various lysates using MonoMethyl-Histone H3-K4 Rabbit mAb (A22078) at 1:20000 dilution.

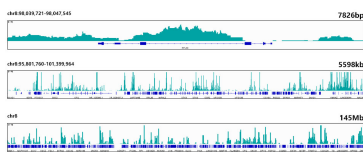
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.

Lysates/proteins: 25µg per lane.

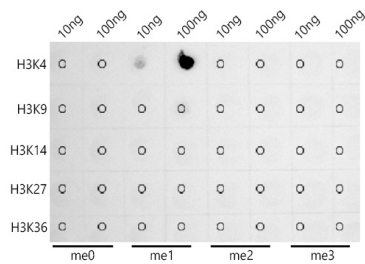
Blocking buffer: 3% nonfat dry milk in TBST.

Detection: ECL Enhanced Kit (RM00021).

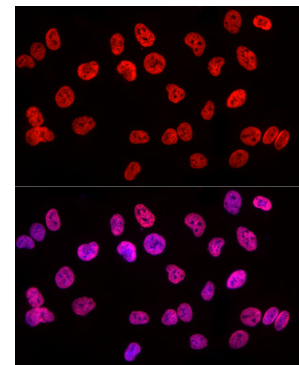
Exposure time: 60s.



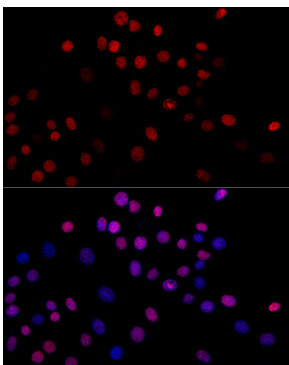
CUT&Tag was performed using the CUT&Tag Assay Kit (pAG-Tn5) for Illumina(RK20265) from  $10^5$  K562 cells with 1 µg MonoMethyl-Histone H3-K4 antibody (A22078), along with a Goat Anti-Rabbit IgG(H+L). The CUT&Tag results indicate the enrichment pattern of H3K4me1 in representative gene loci (RPL30), as shown in figure.



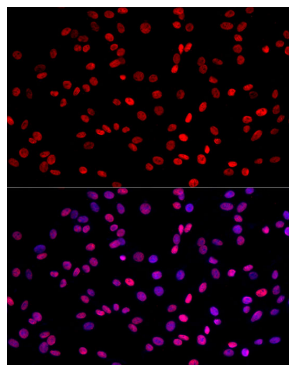
Dot-blot analysis of all sorts of peptides using MonoMethyl-Histone H3-K4 antibody (A22078) at 1:2000 dilution.



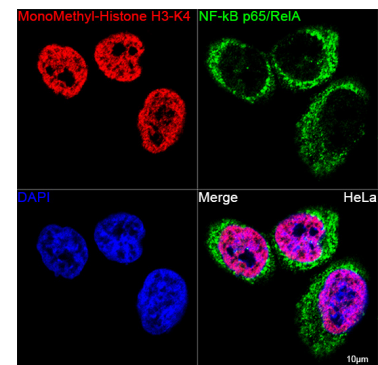
Immunofluorescence analysis of HeLa cells using MonoMethyl-Histone H3-K4 Rabbit mAb (A22078) at dilution of 1:300 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) (AS007) at 1:500 dilution. Blue: DAPI for nuclear staining.



Immunofluorescence analysis of NIH/3T3 cells using MonoMethyl-Histone H3-K4 Rabbit mAb (A22078) at dilution of 1:300 (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 PC-12 cells using MonoMethyl-Histone H3-K4 Rabbit mAb (A22078) at dilution of 1:300 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) (AS007) at 1:500 dilution. Blue: DAPI for nuclear staining.



Confocal imaging of HeLa cells using MonoMethyl-Histone H3-K4 Rabbit mAb (A22078, dilution 1:300) (Green). The cells were counterstained with [KO Validated] NF-kB p65/RelA Rabbit mAb (A22331, dilution 1:100) (Red). DAPI was used for nuclear staining (blue). Objective: 60x.