

# Histone H3K4me3 Polyclonal Antibody

Catalog No: #ABHW003



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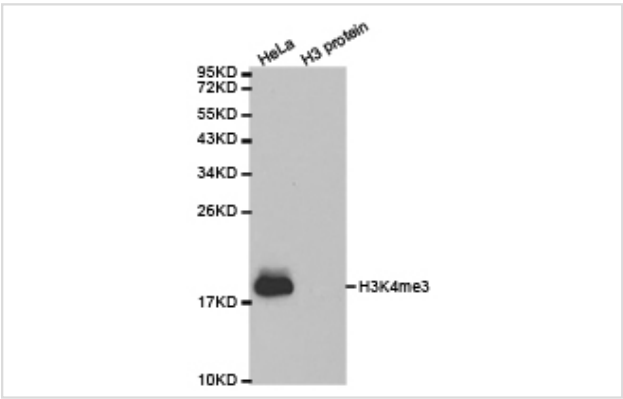
## Description

Product Name	Histone H3K4me3 Polyclonal Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Antibodies were produced by immunizing rabbits and were purified by antigen affinity-chromatography.
Applications	WB IHC IF IP ChIP
Species Reactivity	Hu Ms Rt
Immunogen Type	Peptide
Immunogen Description	A synthetic methylated peptide corresponding to residues surrounding K4 of human histone H3
Target Name	Histone H3
Modification	K4me3
Other Names	HIST1H3J; H3/j; H3FJ; Histone H3.1; Histone H3/a; Histone H3/b; Histone H3/c; Histone H3/d; Histone H3/f; Histone H3/h; Histone H3/i; HistoneH3/j; Histone H3/k; Histone H3/l; HIST3H3;
Accession No.	Gene ID: 8290 Swiss Prot: Q16695
SDS-PAGE MW	15kDa
Concentration	1.0mg/ml
Formulation	Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage	Store at -20°C or -80°C. Avoid freeze / thaw cycles.

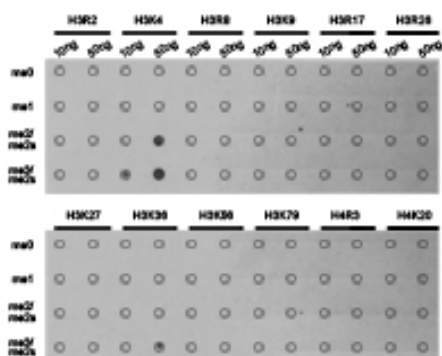
## Application Details

- WB 1:500 - 1:2000
- IHC 1:50 - 1:200
- IF 1:50 - 1:200
- IP 1:50 - 1:200
- ChIP 1:50 - 1:200

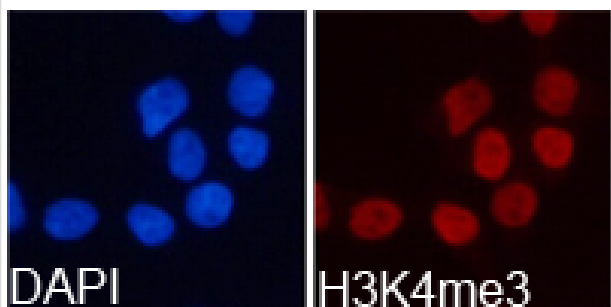
## Images



Western blot analysis of extracts of HeLa cell line and H3 protein expressed in E.coli., using H3K4me3 antibody.



Dot-blot analysis of all sorts of methylation peptides using H3K4me3 antibody.



Immunofluorescence analysis of 293T cell using H3K4me3 antibody. Blue: DAPI for nuclear staining.

## Background

Modulation of chromatin structure plays an important role in the regulation of transcription in eukaryotes. The nucleosome, made up of DNA wound around eight core histone proteins (two each of H2A, H2B, H3, and H4), is the primary building block of chromatin (1). The amino-terminal tails of core histones undergo various post-translational modifications, including acetylation, phosphorylation, methylation, and ubiquitination (2-5). These modifications occur in response to various stimuli and have a direct effect on the accessibility of chromatin to transcription factors and, therefore, gene expression (6). In most species, histone H2B is primarily acetylated at Lys5, 12, 15, and 20 (4,7). Histone H3 is primarily acetylated at Lys9, 14, 18, 23, 27, and 56. Acetylation of H3 at Lys9 appears to have a dominant role in histone deposition and chromatin assembly in some organisms (2,3). Phosphorylation at Ser10, Ser28, and Thr11 of histone H3 is tightly correlated with chromosome condensation during both mitosis and meiosis (8-10). Phosphorylation at Thr3 of histone H3 is highly conserved among many species and is catalyzed by the kinase haspin. Immunostaining with phospho-specific antibodies in mammalian cells reveals mitotic phosphorylation at Thr3 of H3 in prophase and its dephosphorylation during anaphase (11).

1. Workman, J.L. and Kingston, R.E. (1998) *Annu Rev Biochem* 67, 545-79.
2. Hansen, J.C. et al. (1998) *Biochemistry* 37, 17637-41.
3. Strahl, B.D. and Allis, C.D. (2000) *Nature* 403, 41-5.
4. Cheung, P. et al. (2000) *Cell* 103, 263-71.
5. Bernstein, B.E. and Schreiber, S.L. (2002) *Chem Biol* 9, 1167-73.
6. Jaskelioff, M. and Peterson, C.L. (2003) *Nat Cell Biol* 5, 395-9.
7. Thorne, A.W. et al. (1990) *Eur J Biochem* 193, 701-13.
8. Hendzel, M.J. et al. (1997) *Chromosoma* 106, 348-60.
9. Goto, H. et al. (1999) *J Biol Chem* 274, 25543-9.
10. Preuss, U. et al. (2003) *Nucleic Acids Res* 31, 878-85.
11. Dai, J. et al. (2005) *Genes Dev* 19, 472-88.

Note: This product is for in vitro research use only and is not intended for use in humans or animals.