

General Information	
<b>Immunogen</b>	A synthetic methylated peptide corresponding to residues surrounding K4 of human histone H3
<b>IgG type</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Specificity</b>	human MonoMethyl-Histone H3-K4
<b>Applications &amp; dilution</b>	WB 1:500 - 1:2000 IHC 1:50 - 1:200 IF 1:50 - 1:200 IP 1:50 - 1:200 ChIP 1:20 - 1:100 ChIPseq 1:20 - 1:100
<b>Formulation</b>	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
<b>Purity</b>	≥95% purity by SDS-PAGE
<b>Storage</b>	Store at -20°C. Avoid freeze / thaw cycles.
<b>Abbreviation:</b> ELISA: Enzyme-linked immunosorbent assay; ITA: immunoturbidimetric assay; IP: immunoprecipitation; IHC: immunohistochemistry; IF: immunofluorescence. WB: western blot; FC: flowcytometry	

## Background

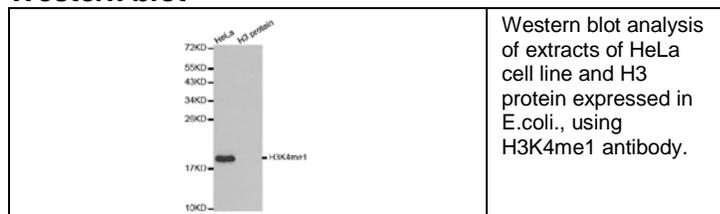
Modulation of chromatin structure plays an important role in the regulation of transcription in eukaryotes. The nucleosome, made up of DNA wound around eight core histone proteins (two each of H2A, H2B, H3, and H4), is the primary building block of chromatin. The amino-terminal tails of core histones undergo various post-translational modifications, including acetylation, phosphorylation, methylation, and ubiquitination. 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. In most species, histone H2B is primarily acetylated at Lys5, 12, 15, and 20. 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. Phosphorylation at Ser10, Ser28, and Thr11 of histone H3 is tightly correlated with chromosome condensation during both mitosis and meiosis. 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.

## Preparation

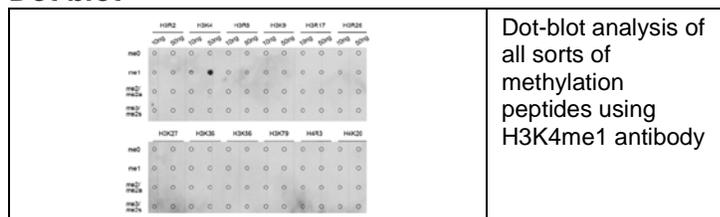
Polyclonal antibody is produced by immunizing rabbit with a synthetic methylated peptide corresponding to residues surrounding K4 of human histone H3 and purified using protein A resin.

## Applications

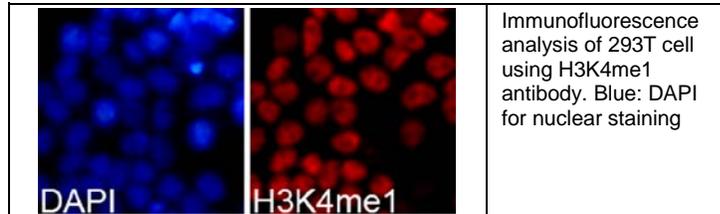
### Western blot



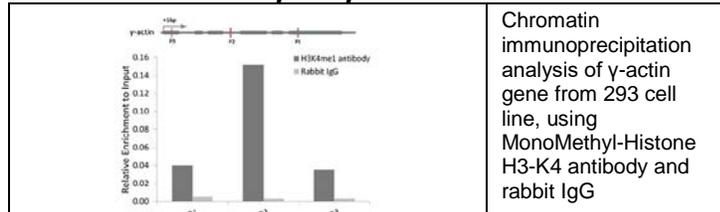
### Dot-blot



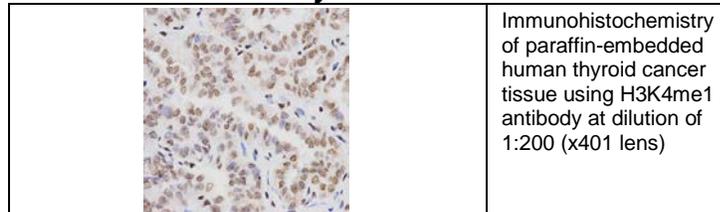
### Immunofluorescence



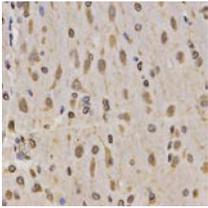
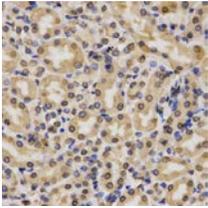
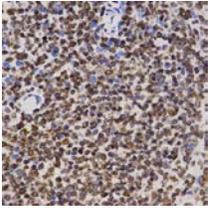
### Chromatin immunoprecipitation



### Immunohistochemistry



### Immunohistochemistry

	Immunohistochemistry of paraffin-embedded rat brain tissue using H3K4me1 antibody at dilution of 1:200 (x402 lens)
	Immunohistochemistry of paraffin-embedded rat kidney tissue using H3K4me1 antibody at dilution of 1:200 (x403 lens)
	Immunohistochemistry of paraffin-embedded rat spleen tissue using H3K4me1 antibody at dilution of 1:200 (x400 lens)

### Storage

This antibody is shipped at 4 °C. This product is stable for 12 months from date of receipt when stored at -20 °C to -70 °C. Avoid freeze/thaw cycles.

### Hazard/Biohazard

This antibody contains 0.02% sodium azide as preservative. Please handle and dispose the product properly. No known biohazard is associated with this product.

**For research use only**