

#9717 Store at -20°C

Histone H3 (3H1) Rabbit mAb

✓ 100 µl
(10 western blots)

rev. 01/26/12

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



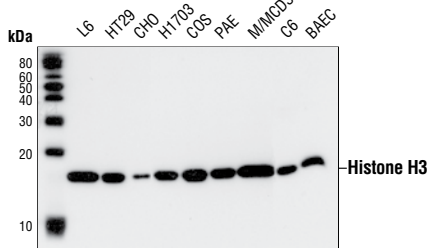
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Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, R, Mk, B, Hm, Dg, Pg, Z, Dm	17 kDa	Rabbit IgG**

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).

Specificity/Sensitivity: Histone H3 (3H1) Rabbit Monoclonal Antibody detects endogenous levels of total histone H3 protein. The antibody does not cross-react with other proteins.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the carboxy-terminal residues of human histone H3.



Western blot analysis of extracts from various cell lines using Histone H3 (3H1) Rabbit mAb.

Background References:

- (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.

Entrez-Gene ID #8352
Swiss-Prot Acc. #P68431

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

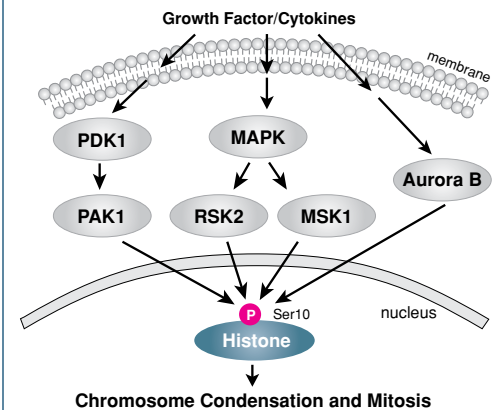
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.



Rabbit monoclonal antibody is produced under license (granting certain rights including those under U. S. Patents No. 5,675,063 and 7,429,487) from Epitomics, Inc.

IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry IC—Immunocytochemistry IF—Immunofluorescence
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken X—Xenopus
Species enclosed in parentheses are predicted to react based on 100% sequence homology.

F—Flow cytometry E—ELISA D—DELFI[®]
Z—zebra fish B—bovine All—all species expected