10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Phospho-Histone H3.1-S10 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AE1016d

Specification

Phospho-Histone H3.1-S10 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	P68431
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Concentration	**1mg/ml**
Isotype	**Rabbit IgG**
Calculated MW	**15404**

Phospho-Histone H3.1-S10 Antibody - Additional Information

Gene ID 8350;8351;8352;8353;8354;8355;8356;8357;8358;8968

Other Names
Histone H31, Histone H3/a, Histone H3/b, Histone H3/c, Histone H3/d, Histone H3/f, Histone H3/h, Histone H3/i, Histone H3/j, Histone H3/k, Histone H3/l, HIST1H3A, H3FA

Target/Specificity
The antibody was affinity-purified from rabbit antiserum using epitope-specific phosphopeptide column, and the antibody against non-phosphopeptide was removed using non-phosphopeptide column corresponding to the phosphorylation site.

Dilution
WB~~1:500~1:1000
IHC~~1:50~1:100
IF~~1:100~200

Format
affinity Purified IgG, in PBS, 0.02% sodium azide and 50% glycerol.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Phospho-Histone H3.1-S10 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-Histone H3.1-S10 Antibody - Protein Information

Name H3C1 (HGNC:4766)

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Synonyms H3FA, HIST1H3A

Function
Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling.

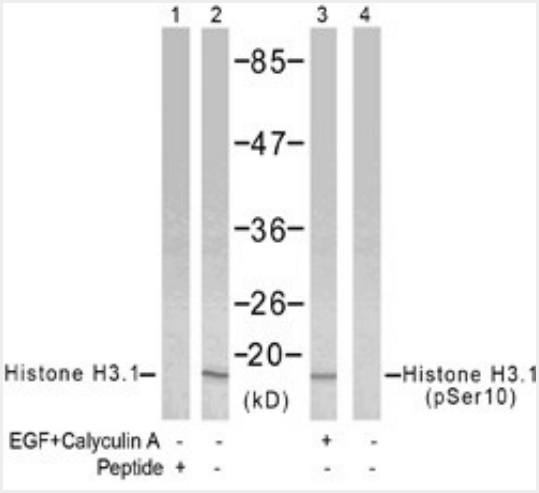
Cellular Location
Nucleus. Chromosome.

Phospho-Histone H3.1-S10 Antibody - Protocols

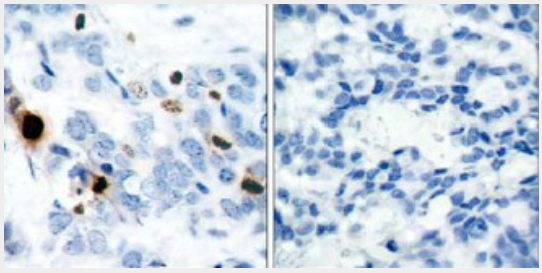
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-Histone H3.1-S10 Antibody - Images

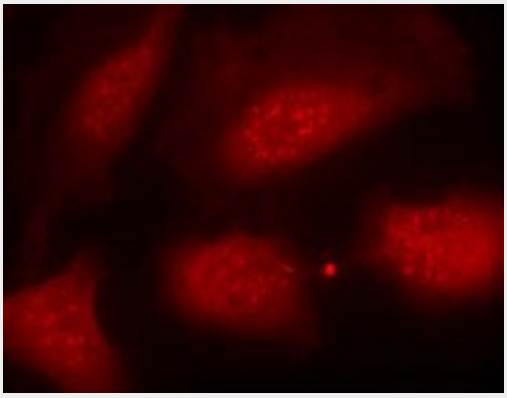


Western blot analysis of extract from HeLa cells using Histone H3.1 Antibody (S10) (#AE1016c, Lane 1 and 2) and Phospho-Histone H3.1-S10 Antibody (#AE1016d, Lane 3 and 4).



10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using Phospho-Histone H3.1-S10 Antibody (#AE1016d)(left) or the same antibody preincubated with blocking peptide(right).



Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear dot staining using Phospho-Histone H3.1-S10 Antibody (#AE1016d).

Phospho-Histone H3.1-S10 Antibody - Background

Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. This structure consists of approximately 146 bp of DNA wrapped around a nucleosome, an 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 member of the histone H3 family. Transcripts from this gene lack polyA tails; instead, they contain a palindromic termination element. This gene is found in the large histone gene cluster on chromosome 6p22-p21.3.

Phospho-Histone H3.1-S10 Antibody - References

PHF8 activates transcription of rRNA genes through H3K4me3 binding and H3K9me1/2 demethylation. Feng W, et al. Nat Struct Mol Biol, 2010 Apr. PMID 20208542.
Nucleosome formation activity of human somatic nuclear autoantigenic sperm protein (sNASP). Osakabe A, et al. J Biol Chem, 2010 Apr 16. PMID 20167597.
Structural biology of human H3K9 methyltransferases. Wu H, et al. PLoS One, 2010 Jan 11. PMID 20084102.
Molecular functions of the histone acetyltransferase chaperone complex Rtt109-Vps75. Berndsen CE, et al. Nat Struct Mol Biol, 2008 Sep. PMID 19172748.
Np95 is a histone-binding protein endowed with ubiquitin ligase activity. Citterio E, et al. Mol Cell Biol, 2004 Mar. PMID 14993289.