

## Monoclonal Antibody to Histone H3 pSer10 - Aff - Purified

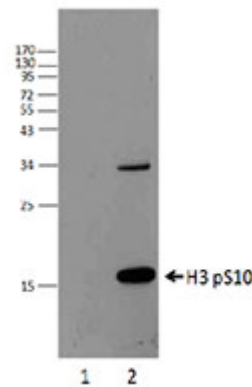
<b>Alternate names:</b>	H3 Histone family, HIST1H3
<b>Catalog No.:</b>	AM33093PU-S
<b>Quantity:</b>	25 µg
<b>Concentration:</b>	0.5 mg/ml
<b>Background:</b>	<p>H3 is a core component of the nucleosome that serves to wrap and compact DNA into chromatin. Histones therefore, limit the accessibility of DNA, providing mechanisms for transcription regulation, DNA repair and replication and chromosomal stability. During mitosis, H3 is phosphorylated at serine 28. This phosphorylation coincides with chromosome condensation initiated at prophase and disappears at late anaphase H3 has been demonstrated to be phosphorylated by the action of MLTK-<math>\alpha</math> (mixed lineage kinase-like mitogen activated protein triple kinase <math>\alpha</math>) in response to ultraviolet B light and epidermal growth factor, as well as Aurora-B during mitosis.</p> <p><b>Structure:</b> H3 is part of the nucleosome, comprised of an octameric complex with H2A, H2B, and H4 proteins.</p> <p><b>Distribution:</b> Nucleus.</p> <p><b>Function:</b> H3 is a core component of the nucleosome that serves to wrap and compact DNA into chromatin. Histones therefore, limit the accessibility of DNA, providing mechanisms for transcription regulation, DNA repair and replication and chromosomal stability.</p> <p><b>Regulation:</b> H3 is regulated by acetylation, methylation, citrullination, phosphorylation, and ubiquitination.</p> <p><b>Interaction:</b> Two molecules of H3 form a heterotetramer with two molecules of H4.</p>
<b>Host / Isotype:</b>	Mouse / IgG2b
<b>Clone:</b>	11D8
<b>Immunogen:</b>	Modified synthetic peptide conjugated to KLH
<b>Format:</b>	<p><b>State:</b> Liquid purified IgG fraction</p> <p><b>Purification:</b> Antigen Affinity Chromatography</p> <p><b>Buffer System:</b> PBS, pH 7.2</p> <p><b>Preservatives:</b> 0.05% Sodium Azide</p>
<b>Applications:</b>	<p><b>Western blot:</b> Each lot of this antibody is quality control tested.</p> <p><b>Recommended Dilutions:</b> Use 1 µg per ml antibody dilution buffer for each mini-gel.</p> <p><b>Immunofluorescence.</b></p> <p>Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.</p>
<b>Specificity:</b>	The 11D8 monoclonal antibody recognizes Human Histone H3-Phosphorylated (Ser10).

**Storage:** Store undiluted at 2-8°C.  
**DO NOT FREEZE!**  
Shelf life: one year from despatch.

**General Readings:**

1. Choi HS, Choi BY, Cho YY, Zhu F, Bode AM, Dong Z. Phosphorylation of Ser28 in histone H3 mediated by mixed lineage kinase-like mitogen-activated protein triple kinase alpha. *J Biol Chem.* 2005 Apr 8;280(14):13545-53. Epub 2005 Jan 31. PubMed PMID: 15684425.
2. Goto H, Yasui Y, Nigg EA, Inagaki M. Aurora-B phosphorylates Histone H3 at serine28 with regard to the mitotic chromosome condensation. *Genes Cells.* 2002 Jan;7(1):11-7. PubMed PMID: 11856369.
3. Garcia BA, Barber CM, Hake SB, Ptak C, Turner FB, Busby SA, et al. Modifications of human histone H3 variants during mitosis. *Biochemistry.* 2005 Oct 4;44(39):13202-13. PubMed PMID: 16185088.
4. Hans F, Dimitrov S. Histone H3 phosphorylation and cell division. *Oncogene.* 2001 May 28;20(24):3021-7. PubMed PMID: 11420717.

**Pictures:** 293T cell extracts were resolved by electrophoresis, transferred to nitrocellulose, and probed with purified anti-H3-pS10 clone 11D8 antibody. Proteins were visualized using an anti-mouse IgG secondary conjugated to HRP and chemiluminescence detection. Lane 1, is inter phase 293T cell extract; lane 2, is M phase 293T cell extract (overnight nocodazole-treated cells).



Exponentially growing HeLa cells were stained with purified phosphor-Histone H3 (Ser10), clone 11D8 antibody, followed by Alexa Fluor® 488 conjugated to anti-mouse IgG and DAPI. The phosphor-Histone staining is specific on metaphase cells only.

