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Phospho-Histone H3(S10) Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1151a

Product Information

Application	WB, E
Primary Accession	P84243
Other Accession	P61830, P02299, P08898, P02302, P02301, Q6NXT2, A5PK61, Q6PI79, P84245, P84246, Q71LE2, P84244, P84249, Q6PI20, P84247, Q5E9F8, Q27532, Q9U281, Q10453, P84233, P84228, Q71DI3, Q4QRF4, P84229, P84227, Q6LED0, P68433, P68431, P68432, Q16695
Reactivity	Human, Mouse
Predicted	Rat, Rabbit, Zebrafish, Pig, Chicken, Yeast, Xenopus, Bovine, C.Elegans, Drosophila
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Names	44AT1032.72
Calculated MW	15328

Additional Information

Gene ID	3020;3021
Other Names	Histone H33, H3F3A, H33A, H3F3
Target/Specificity	This Histone H3 Antibody is generated from mice immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S10 of human Histone H3.
Dilution	WB~~1:500~1000 E~~Use at an assay dependent concentration.
Format	fomat Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-Histone H3(S10) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	H3-3A (HGNC:4764)

Synonyms	H3.3A, H3F3, H3F3A
Function	Variant histone H3 which replaces conventional H3 in a wide range of nucleosomes in active genes. Constitutes the predominant form of histone H3 in non-dividing cells and is incorporated into chromatin independently of DNA synthesis. Deposited at sites of nucleosomal displacement throughout transcribed genes, suggesting that it represents an epigenetic imprint of transcriptionally active chromatin. 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

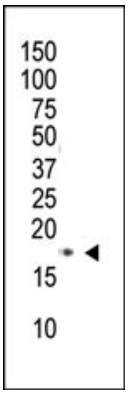
Background

Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. Two molecules of each of the four core histones (H2A, H2B, H3, and H4) form an octamer, around which approximately 146 bp of DNA is wrapped in repeating units, called nucleosomes. The linker histone, H1, interacts with linker DNA between nucleosomes and functions in the compaction of chromatin into higher order structures. This gene contains introns and its mRNA is polyadenylated, unlike most histone genes. The protein encoded is a replication-independent member of the histone H3 family.

References

Distinct factors control histone variant H3.3 localization at specific genomic regions. Goldberg AD, et al. Cell, 2010 Mar 5. PMID 20211137.
New functions for an old variant: no substitute for histone H3.3. Elsaesser SJ, et al. Curr Opin Genet Dev, 2010 Apr. PMID 20153629.
ATRX interacts with H3.3 in maintaining telomere structural integrity in pluripotent embryonic stem cells. Wong LH, et al. Genome Res, 2010 Mar. PMID 20110566.
Phosphorylation of histone H3 by protein kinase C signaling plays a critical role in the regulation of the developmentally important TBX2 gene. Teng H, et al. J Biol Chem, 2009 Sep 25. PMID 19633291.
Organismal differences in post-translational modifications in histones H3 and H4. Garcia BA, et al. J Biol Chem, 2007 Mar 9. PMID 17194708.

Images



Western analysis of extracts from HL60 cells treated with 100nM of calyculin using Histone H3-pS10 Antibody.