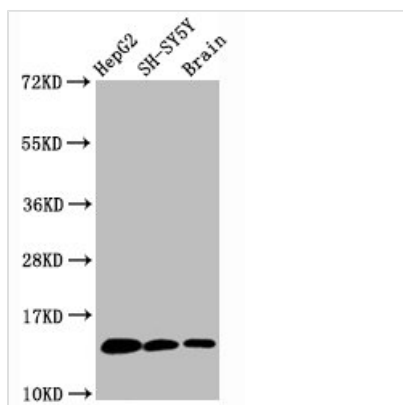




Mono-methyl-Histone H3.1 (K36) Recombinant Monoclonal Antibody

Product Code	CSB-RA010418A36me1HU
Abbreviation	Histone H3.1
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P68431
Immunogen	A synthesized peptide
Species Reactivity	Human
Tested Applications	ELISA, WB, ICC, IF; Recommended dilution: WB:1:500-1:2000, ICC:1:50-1:500, IF:1:30-1:200
Relevance	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.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Histone H3.1, 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, AND, HIST1H3B, H3FL, AND, HIST1H3C, H3FC, AND, HIST1H3D, H3FB, AND, HIST1H3E, H3FD, AND, HIST1H3F, H3FI, AND, HIST1H3G, H3FH, AND, HIST1H3H, H3FK, AND, HIST1H3I, H3FF, AND, HIST1H3J, H3FJ
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling
Gene Names	HIST1H3A
Clone No.	1F4
Image	



Western Blot

Positive WB detected in HepG2 whole cell lysate, SH-SY5Y whole cell lysate, Rat brain tissue

All lanes Mono-methyl-Histone

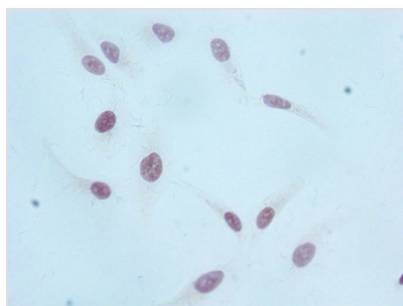
H3.1(K36)antibody at 0.6μg/ml

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

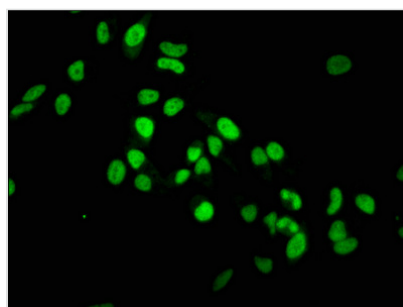
Predicted band size: 15 KDa

Observed band size: 15 KDa



Immunocytochemistry analysis of CSB-

RA010418A36me1HU diluted at 1:100 and staining in Hela cells performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



Immunofluorescence staining of Hela cells with CSB-RA010418A36me1HU at 1:37.5, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. The secondary antibody was Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

The production of the mono-methyl-histone H3.1 (K36) recombinant monoclonal antibody comprises the cloning of genes responsible for encoding the HIST1H3A antibody and their subsequent expression within mammalian cell expression systems. This process involves the cloning of both heavy and light chain genes of the HIST1H3A antibody into expression vectors, which are later introduced into host cells through transfection. Subsequently, the host cells take on the role of producing and secreting the antibodies. Following production, the antibody undergoes purification using affinity chromatography techniques. The final antibody product is rigorously tested for functionality across a range of applications, including ELISA, WB, ICC, and IF, specifically designed for the accurate detection of the human HIST1H3A protein mono-methylated at K36.

Mono-methylation of HIST1H3A at lysine 36 (K36) primarily functions in transcriptional repression and chromatin compaction, with roles in alternative splicing, DNA repair, cellular identity, epigenetic memory, and implications in disease. It is a crucial epigenetic modification that helps regulate gene expression and chromatin structure.