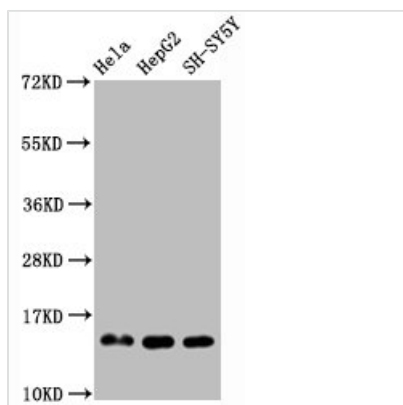




Mono-methyl-Histone H3.1 (R2) Recombinant Monoclonal Antibody

Product Code	CSB-RA010418A02me1HU
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.	4G5
Image	



Western Blot

Positive WB detected in HeLa whole cell lysate, HepG2 whole cell lysate, SH-SY5Y whole cell lysate

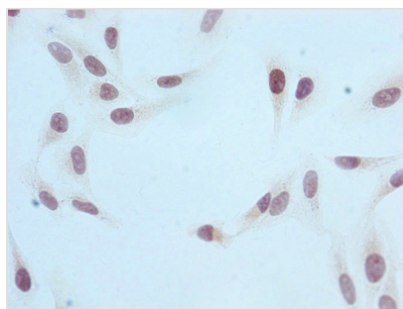
All lanes Mono-methyl-Histone H3.1(R2)antibody at 0.95µg/ml

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

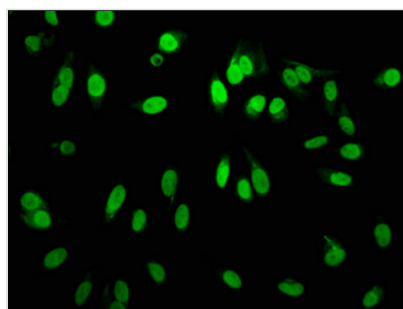
Predicted band size: 15 KDa

Observed band size: 15 KDa



Immunocytochemistry analysis of CSB-

RA010418A02me1HU 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°C 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-RA010418A02me1HU at 1:60, 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°C. The secondary antibody was Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

The mono-methyl-histone H3.1 (R2) recombinant monoclonal antibody production involves cloning genes encoding for the HIST1H3A antibody and expressing them in mammalian cell expression systems. The genes encoding the heavy and light chains of the HIST1H3A antibody are cloned into expression vectors, which are then introduced into host cells via transfection. The host cells then produce and secrete the antibodies, which can be purified through affinity chromatography. The resulting antibody has been tested for functionality in ELISA, WB, ICC, and IF applications for the detection of human HIST1H3A protein mono-methylated at R2.

Mono-methylation of HIST1H3A at arginine 2 (R2) is an epigenetic modification that can influence gene expression and chromatin structure, particularly promoting gene activation and accessibility. Its dynamic regulation is crucial for maintaining cellular identity and responding to environmental cues, with potential implications in various diseases.