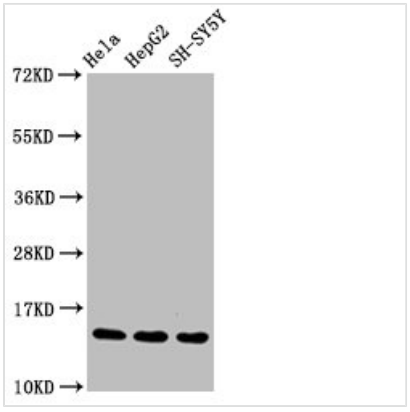
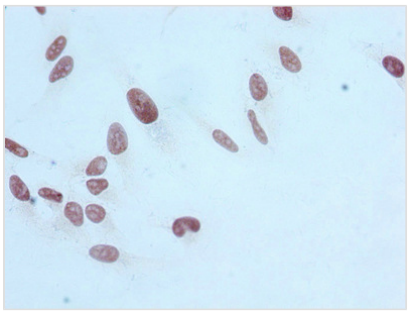
Mono-methyl-Histone H3.1 (R17) Recombinant Monoclonal Antibody

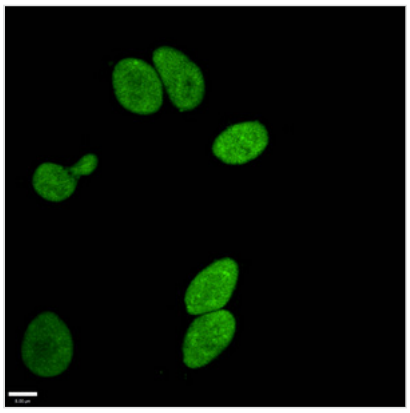
Product Code	CSB-RA010418A17me1HU
Abbreviation	Histone H3.1
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P68431
Immunogen	A synthesized peptide
Species Reactivity	Human
Tested Applications	ELISA, WB, ICC, IF; Recommended dilution: WB:1:500-1:2000, ICC:1:50-1:500, 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.	3E10
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(R17)antibody at 1.55μg/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-RA010418A17me1HU diluted at 1:100 and staining in Hela cells performed on a Leica BondTM 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 withCSB-RA010418A17me1HU at 1:96,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-congugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

The production of the mono-methyl-Histone H3.1 (R17) recombinant monoclonal antibody is a stepwise procedure that begins with the cloning of genes encoding the HIST1H3A antibody, which includes both the heavy and light chains. These cloned genes are then inserted into expression vectors designed for optimal performance. Following this, the modified expression vectors are introduced into host cells through transfection, where the host cells undertake the task of producing and secreting the antibody. The purified antibody is obtained through affinity chromatography to ensure its purity and functionality. To guarantee its effectiveness, the antibody undergoes a series of rigorous tests across diverse applications, such as ELISA, WB, ICC, and IF, tailored for the precise detection of the human HIST1H3A protein mono-methylated at R17.

Mono-methylation of Histone H3.1 at arginine 17 (R17) is involved in transcriptional regulation, chromatin structure, DNA repair, cellular identity, and epigenetic signaling, and has implications in various diseases.