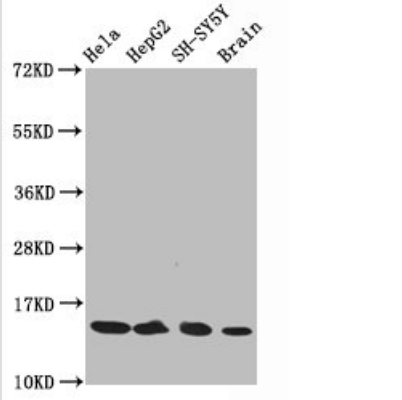
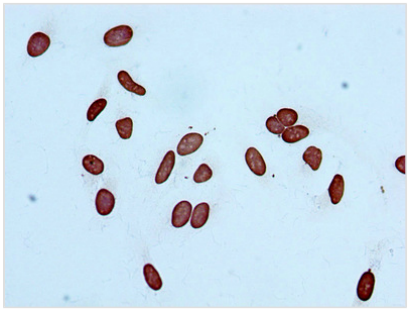
Acetyl-Histone H3.1 (K14) Recombinant Monoclonal Antibody

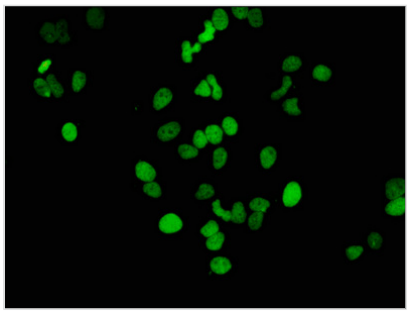
Product Code	CSB-RA010418A14acHU
Abbreviation	Histone H3.1
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P68431
Immunogen	A synthesized peptide
Species Reactivity	Human, Rat
Tested Applications	ELISA, WB, ICC, IF; Recommended dilution: WB:1:500-1:2000, ICC:1:50-1:500, 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
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling
Gene Names	HIST1H3A
Clone No.	3H3
Image	



Western Blot
Positive WB detected in Hela whole cell lysate, HepG2 whole cell lysate, SH-SY5Y whole cell lysate, Rat brain tissue
All lanes Acetyl-Histone H3.1(K14)antibody at 0.75µg/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-RA010418A14acHU 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(treated by 15mM sodium butyrate for 30min) with CSB-RA010418A14acHU at 1:46,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 development of the acetyl-Histone H3.1 (K14) recombinant monoclonal antibody begins with the cloning of genes responsible for encoding the HIST1H3A antibody, encompassing both heavy and light chains. These cloned genes are then inserted into an expression vector, which is subsequently introduced into host cells through transfection. The host cells are cultured to produce and secrete the antibody. Following this, the antibody undergoes purification using affinity chromatography to ensure its purity and effectiveness. Rigorous testing then confirms its functionality in various applications, including ELISA, WB, ICC, and IF, allowing for precise detection of the human and rat HIST1H3A proteins acetylated at K14.

Acetylation of histone H3.1 at lysine 14 (K14) primarily functions in transcriptional activation, chromatin accessibility, cellular identity, epigenetic memory, and coordinated gene regulation, and has implications in various diseases.