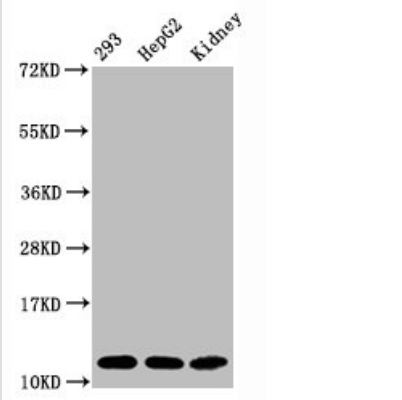
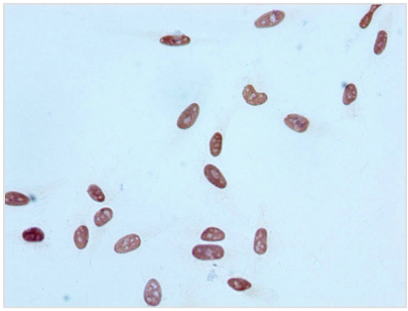
Acetyl-Histone H4 (K16) Recombinant Monoclonal Antibody

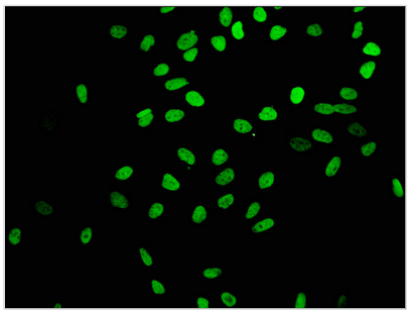
Product Code	CSB-RA010429A16acHU
Abbreviation	Histone H4
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P62805
Immunogen	A synthesized peptide
Species Reactivity	Human, Mouse
Tested Applications	ELISA, WB, ICC, IF, FC; Recommended dilution: WB:1:500-1:2000, ICC:1:50-1:500, IF:1:50-1:200
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	HIST1H4A
Clone No.	2B8
Image	



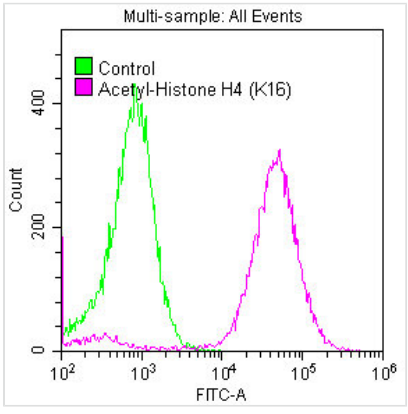
Western Blot
Positive WB detected in:293 whole cell lysate, HepG2 whole cell lysate, Mouse kidney tissue
All lanes:Acetyl-Histone H4 (K16) antibody at 1.65µg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 11 KDa
Observed band size: 11 KDa



Immunocytochemistry analysis of CSB-RA010429A16acHU 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-RA010429A16acHU at 1:403,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).



Overlay histogram showing Hela cells stained with CSB-RA010429A16acHU (red line) at 1:50. The cells were fixed with 70% Ethylalcohol (18h) and then permeabilized with 0.3% Triton X-100 for 2 min.The cells were then incubated in 1x PBS /10% normal goat serum to block non-specific protein-protein interactions followed by primary antibody for 1 h at 4?.The secondary antibody used was FITC goat anti-rabbit IgG (H+L) at 1/200 dilution for 1 h at 4?. Control antibody (green line) was used under the same conditions. Acquisition of >10,000 events was performed.

Description

Producing the acetyl-histone H4 (K16) recombinant monoclonal antibody is a methodical process that commences with the cloning of genes encoding the HIST1H4A antibody, covering both heavy and light chains. These cloned genes are integrated into expression vectors, which are introduced into host cells through transfection. Subsequently, the host cells are entrusted with antibody

production and secretion in a suitable medium. The purified antibody, obtained through affinity chromatography, undergoes comprehensive testing to assess its functionality across diverse applications such as ELISA, WB, ICC, IF, and FC, all tailored for detecting the human and mouse HIST1H4A proteins acetylated at K16.

Histone H4 is a core histone involved in chromatin structure and gene regulation. Acetylation of histone H4 at lysine 16 (H4K16) primarily functions in chromatin decondensation, transcriptional activation, DNA repair, epigenetic signaling, cellular memory, and coordinated gene regulation.