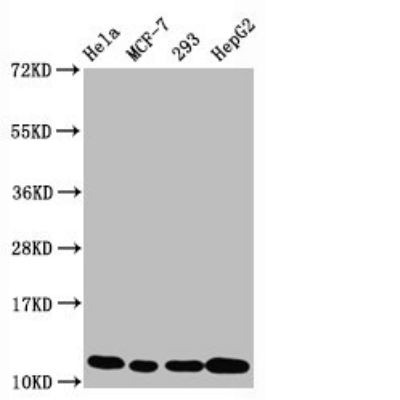
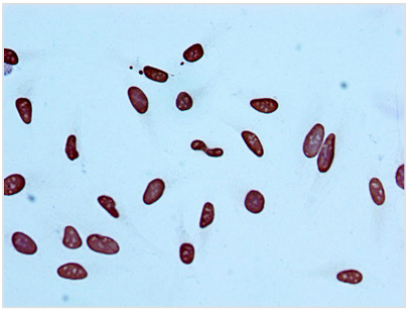
Acetyl-Histone H4 (K5) Recombinant Monoclonal Antibody

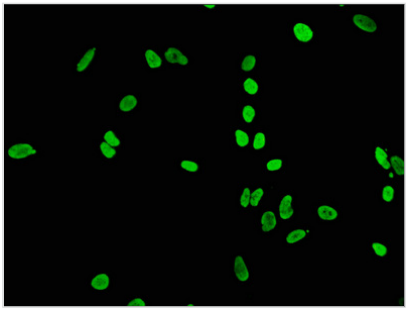
Product Code	CSB-RA010429A05acHU
Abbreviation	Histone H4
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P62805
Immunogen	A synthesized peptide
Species Reactivity	Human
Tested Applications	ELISA, WB, ICC, IF; Recommended dilution: WB:1:500-1:2000, ICC:1:50-1:500, IF:1:30-1:200
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 H4, HIST1H4A, H4/A, H4FA, AND, HIST1H4B, H4/I, H4FI, AND, HIST1H4C, H4/G, H4FG, AND, HIST1H4D, H4/B, H4FB, AND, HIST1H4E, H4/J, H4FJ, AND, HIST1H4F, H4/C, H4FC, AND, HIST1H4H, H4/H, H4FH, AND, HIST1H4I, H4/M, H4FM, AND, HIST1H4J, H4/E, H4FE, AND, HIST1H4K, H4/D, H4FD, AND, HIST1H4L, H4/K, H4FK, AND, HIST2H4A, H4/N, H4F2, H4FN, HIST2H4, AND, HIST2H4B, H4/O, H4FO, AND, HIST4H4
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling
Gene Names	HIST1H4A
Clone No.	2C9
Image	



Western Blot
Positive WB detected in Hela whole cell lysate, MCF-7 whole cell lysate, 293 whole cell lysate, HepG2 whole cell lysate
All lanes Acetyl-Histone H4 (K5) antibody at 1.05µg/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-RA010429A05acHU 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-RA010429A05acHU at 1:65,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 acetyl-Histone H4 (K5) recombinant monoclonal antibody commences with the cloning of genes encoding the HIST1H4A antibody, which includes both heavy and light chains. These cloned genes are integrated into expression vectors, which are subsequently transfected into host cells. The host cells are cultured for antibody production and secretion. The purified antibody is achieved through affinity chromatography, guaranteeing its purity and efficacy. It is further subjected to comprehensive testing across various applications, including ELISA, WB, ICC, and IF, enabling precise detection of the human HIST1H4A protein acetylated at K5.

Acetylation at H4K5 promotes chromatin decondensation and is primarily associated with transcriptional activation. H4K5 acetylation is involved in DNA repair processes. H4K5 acetylation often occurs in conjunction with other histone modifications, forming a complex regulatory code that fine-tunes gene expression.