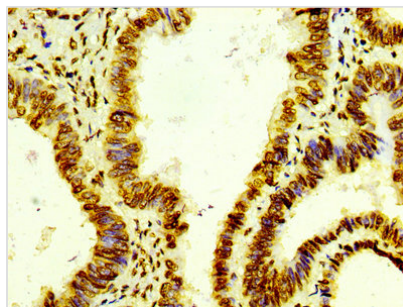


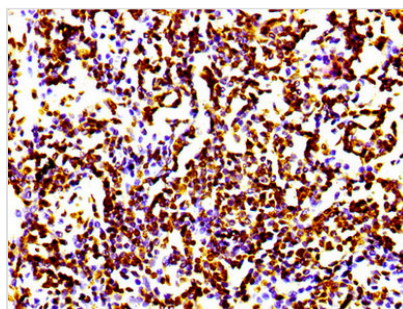


# Histone H4 Recombinant Monoclonal Antibody

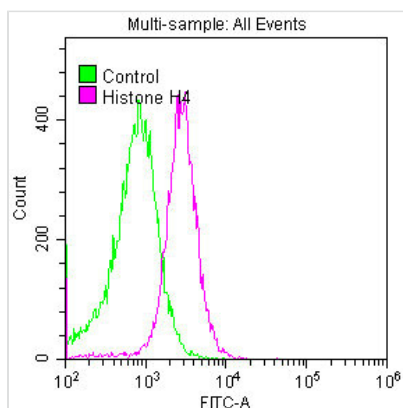
<b>Product Code</b>	CSB-RA010429A0HU
<b>Abbreviation</b>	Histone H4
<b>Storage</b>	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
<b>Uniprot No.</b>	P62805
<b>Immunogen</b>	A synthesized peptide
<b>Species Reactivity</b>	Human
<b>Tested Applications</b>	ELISA, IHC, FC; Recommended dilution: IHC:1:50-1:500
<b>Relevance</b>	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.
<b>Form</b>	Liquid
<b>Conjugate</b>	Non-conjugated
<b>Storage Buffer</b>	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
<b>Purification Method</b>	Affinity-chromatography
<b>Isotype</b>	Rabbit IgG
<b>Clonality</b>	Monoclonal
<b>Alias</b>	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
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Research Area</b>	Epigenetics and Nuclear Signaling
<b>Gene Names</b>	HIST1H4A
<b>Clone No.</b>	21E8
<b>Image</b>	



IHC image of CSB-RA010429A0HU diluted at 1:100 and staining in paraffin-embedded human colon cancer performed on a Leica Bond<sup>TM</sup> 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<sup>o</sup> overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



IHC image of CSB-RA010429A0HU diluted at 1:100 and staining in paraffin-embedded human lung cancer performed on a Leica Bond<sup>TM</sup> 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<sup>o</sup> overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



Overlay histogram showing HeLa cells stained with CSB-RA010429A0HU (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<sup>o</sup>. The secondary antibody used was FITC goat anti-rabbit IgG (H+L) at 1/200 dilution for 1 h at 4<sup>o</sup>. Control antibody (green line) was used under the same conditions. Acquisition of >10,000 events was performed.

## Description

The production of the histone H4 recombinant monoclonal antibody starts with the isolation of genes responsible for encoding the HIST1H4A antibody from rabbits previously immunized with a synthesized peptide derived from the human HIST1H4A protein. These HIST1H4A antibody genes are then meticulously cloned into specialized expression vectors. Following this genetic modification, the modified vectors are introduced into host suspension cells, which are carefully cultured to stimulate the expression and secretion of antibodies. After this cultivation phase, the histone H4 recombinant monoclonal antibody is subjected to a rigorous purification process utilizing affinity chromatography techniques, effectively separating the antibody from the surrounding cell culture supernatant. Finally, the functionality of the antibody is comprehensively assessed through a battery of tests, including ELISA, IHC, and FC tests, conclusively confirming its ability to interact effectively with the human histone H4.

Histone H4, as a crucial component of chromatin, participates in various cellular



processes that govern gene expression, DNA integrity, and cell division. Its dynamic interactions with DNA and various post-translational modifications make it a key player in epigenetic regulation.