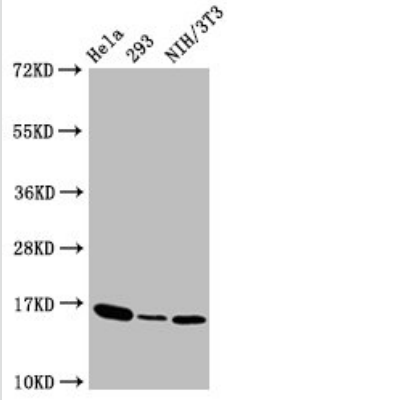
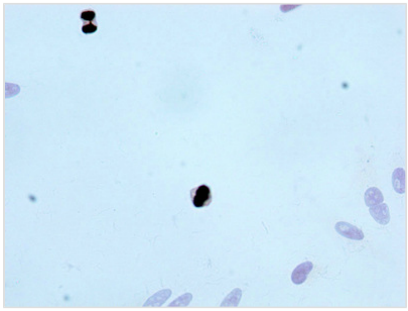
Phospho-Histone H3.3 (T3) Recombinant Monoclonal Antibody

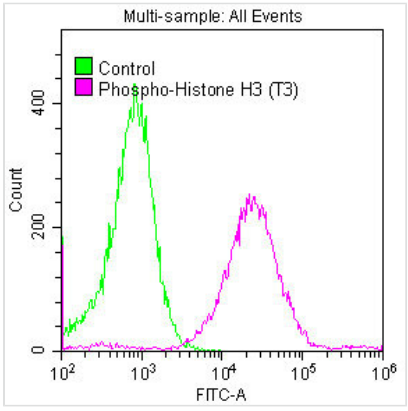
Product Code	CSB-RA010109A03phHU
Abbreviation	Histone H3.3
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P84243
Immunogen	A synthesized peptide
Species Reactivity	Human, Mouse
Tested Applications	ELISA, WB, ICC, FC; Recommended dilution: WB:1:500-1:5000, ICC:1:50-1:500
Relevance	Variant histone H3 which replaces conventional H3 in a wide range of nucleosomes in active genes. Constitutes the predominant form of histone H3 in non-dividing cells and is incorporated into chromatin independently of DNA synthesis. Deposited at sites of nucleosomal displacement throughout transcribed genes, suggesting that it represents an epigenetic imprint of transcriptionally active chromatin. 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 H3.3, H3F3A, H3.3A, H3F3, PP781, AND, H3F3B, H3.3B
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling
Gene Names	H3F3A
Clone No.	28H4
Image	



Western Blot
Positive WB detected in:Hela whole cell lysate,293 whole cell lysate,NIH/3T3 whole cell lysate
All lanes:Phospho-Histone H3 (T3) antibody at 1.41μg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 16 KDa
Observed band size: 16 KDa



Immunocytochemistry analysis of CSB-RA010109A03phHU 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°C 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-RA010109A03phHU (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

The process of producing the phospho-Histone H3.3 (T3) recombinant antibody commences with the cloning of the genes encoding the H3F3A antibody, encompassing both heavy and light chains, and their insertion into expression vectors. These modified vectors are then introduced into host cells through transfection, prompting the host cells to take on the role of antibody production and secretion. The resulting phospho-Histone H3.3 (T3) antibody is purified using affinity chromatography to ensure its purity and effectiveness. Rigorous testing follows to evaluate its functionality across a spectrum of applications, including ELISA, WB, ICC, and FC, all designed for the specific detection of the human and mouse H3F3A proteins phosphorylated at T3.

Phosphorylation of Histone H3.3 at threonine 3 (T3) is involved in transcriptional regulation, chromatin remodeling, DNA repair, cell cycle regulation, epigenetic signaling, and cellular memory, and has implications in various diseases. It is a dynamic modification that helps regulate gene expression and chromatin

structure.