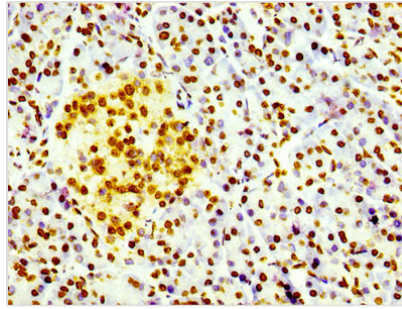


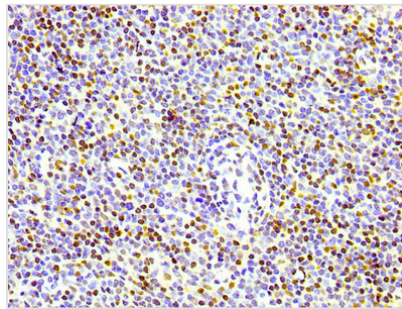


Histone H3.3 Recombinant Monoclonal Antibody

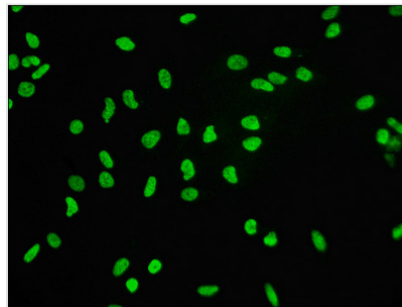
Product Code	CSB-RA010109A0HU
Abbreviation	Histone H3.3
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P84243
Immunogen	A synthesized peptide
Species Reactivity	Human
Tested Applications	ELISA, IHC, IF; Recommended dilution: IHC:1:50-1:500, IF:1:30-1:200
Relevance	Variant 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.	4H2
Image	



IHC image of CSB-RA010109A0HU diluted at 1:100 and staining in paraffin-embedded human pancreatic tissue 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.



IHC image of CSB-RA010109A0HU diluted at 1:100 and staining in paraffin-embedded human lymph node tissue 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 with CSB-RA010109A0HU at 1:60, 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-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).

Description

To create the histone H3.3 recombinant monoclonal antibody, the process initiates with the isolation of genes responsible for coding the H3F3A antibody from rabbits that have been previously exposed to a synthesized peptide originating from the human H3F3A protein. These antibody genes are then meticulously integrated into specialized expression vectors. Following this genetic modification, the vectors are thoughtfully introduced into host suspension cells, which are diligently cultivated to encourage the production and secretion of antibodies. After this cultivation phase, the histone H3.3 recombinant monoclonal antibody undergoes a rigorous purification process using 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 IF, conclusively confirming its capability to interact effectively with the human histone H3.3.

Histone H3.3 is a specialized histone variant that is dynamically incorporated into chromatin to regulate gene expression, DNA repair, and chromatin structure. Its distinct properties and functions make it a key player in various cellular processes, including development, genome maintenance, and gene



regulation.