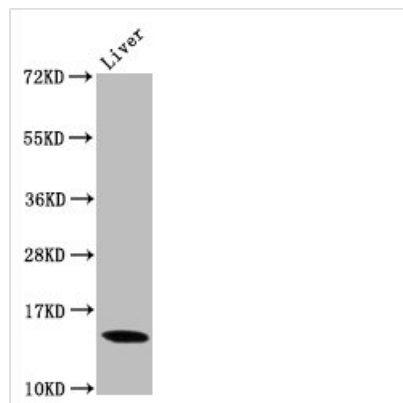




Di-methyl-Histone H3.1 (K9) Recombinant Monoclonal Antibody

Product Code	CSB-RA010418A09me2HU
Abbreviation	Histone H3.1
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P68431
Immunogen	A synthesized peptide
Species Reactivity	Human
Tested Applications	ELISA, WB, IF; Recommended dilution: WB:1:500-1:5000, 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
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling
Gene Names	HIST1H3A
Clone No.	1A10

Image



Western Blot

Positive WB detected in Mouse liver tissue

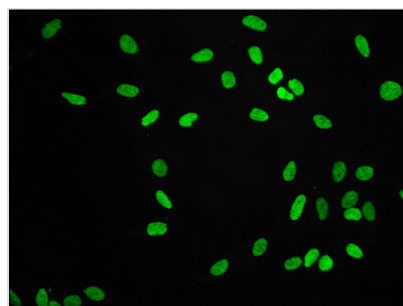
All lanes Di-methyl-Histone H3.1(K9)antibody at 0.9μg/ml

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 15 KDa

Observed band size: 15 KDa



Immunofluorescence staining of Hela cells with CSB-RA010418A09me2HU at 1:56, 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 manufacture the di-methyl-histone H3.1 (K9) recombinant monoclonal antibody, the journey begins with the retrieval of genes responsible for encoding the HIST1H3A antibody from rabbits that have previously undergone immunization with a synthesized peptide originating from the human HIST1H3A protein di-methylated at K9. Subsequently, these antibody genes are seamlessly 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 growth phase, the di-methyl-histone H3.1 (K9) recombinant monoclonal antibody undergoes a meticulous purification process using affinity chromatography techniques, effectively isolating the antibody from the surrounding cell culture supernatant. Lastly, the functionality of the antibody is rigorously assessed through a battery of tests, including ELISA, WB, and IF, conclusively affirming its ability to effectively react with the human HIST1H3A protein di-methylated at K9.

Di-methylated K9 HIST1H3A is also found at centromeres, which are essential for proper chromosome segregation during cell division. When HIST1H3A is di-methylated at K9, it contributes to the repression of gene transcription. This modification creates a repressive chromatin environment by preventing the binding of transcription factors and other regulatory proteins to the DNA.