

Histone H4 Antibody / H4C1/2/3/4/5/6/8/9/11/12/13/14/15/16 (FY12427)

Catalog No.	Formulation	Size
FY12427	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P62805
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml Immunofluorescence: 5ug/ml Immunocytochemistry/Immunofluorescence: 5ug/ml Flow Cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This Histone H4 antibody is available for research use only.

Description

The Histone H4 antibody targets Histone H4, one of the four core histones encoded by multiple HIST1H4 genes. Histone H4 forms part of the nucleosome core along with histones H2A, H2B, and H3, serving as a fundamental structural unit of chromatin. Each nucleosome consists of an octamer of histones wrapped by approximately 147 base pairs of DNA, compacting the genome into higher-order chromatin structures. The Histone H4 antibody provides researchers with a reliable tool to investigate chromatin organization, gene regulation, and post-translational histone modifications.

Histone H4 plays a central role in chromatin stability and accessibility. Its N-terminal tail contains lysine residues that undergo multiple modifications including acetylation, methylation, and phosphorylation, which influence transcriptional activation or repression. The Histone H4 antibody allows detection of both native and modified forms, supporting studies into epigenetic regulation and DNA-templated processes. These modifications are dynamic and essential for replication, repair, and recombination.

During DNA replication, Histone H4 is synthesized and assembled onto nascent DNA to restore chromatin structure. The Histone H4 antibody enables visualization of chromatin assembly and nucleosome spacing in proliferating cells. Dysregulation of H4 expression or modification patterns is associated with aberrant chromatin compaction and altered gene expression, contributing to cancer and developmental disorders. Histone H4 lysine 16 acetylation, for instance, plays a crucial role in chromatin decondensation and transcriptional activation.

Histone H4 interacts with chromatin remodelers, histone chaperones, and modifying enzymes that control nucleosome positioning and dynamics. The Histone H4 antibody is widely used to study histone-protein interactions and to map modification patterns across the genome through chromatin immunoprecipitation (ChIP) assays. Changes in H4 modification landscapes serve as biomarkers for epigenetic reprogramming in response to stress, differentiation, or oncogenic transformation.

The Histone H4 antibody performs effectively in western blotting, immunofluorescence, and immunohistochemistry, producing strong nuclear staining characteristic of chromatin localization. NSJ Bioreagents provides this antibody as a high-specificity reagent for chromatin biology, epigenetics, and molecular genetics research. By enabling accurate detection of Histone H4, the Histone H4 antibody supports comprehensive investigation of nucleosome structure, histone modification dynamics, and chromatin-mediated gene regulation.

Application Notes

Optimal dilution of the Histone H4 antibody should be determined by the researcher.

Immunogen

E.coli-derived human Histone H4 recombinant protein (Position: A16-R96) was used as the immunogen for the Histone H4 antibody.

Storage

After reconstitution, the Histone H4 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.