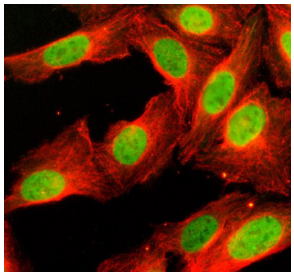
Histone H4 Antibody / Chromatin Structure Marker Antibody (FY12427)

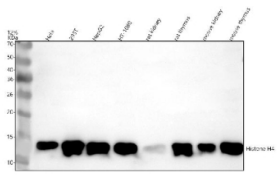
Catalog No.	Formulation	Size
FY12427	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

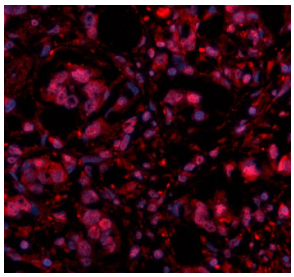
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P62805
Applications	Western Blot: 0.05-0.5ug/ml 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 / Chromatin Structure Marker Antibody is available for research use only.



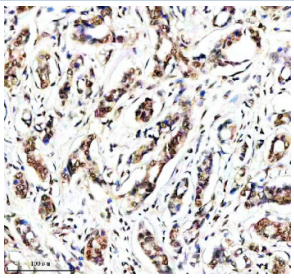
Histone H4 Antibody U2OS IF. Immunofluorescence analysis of human U2OS cells using Histone H4 antibody. Strong nuclear staining (green) is observed, consistent with chromatin-associated localization of Histone H4 and HIST1H4 family proteins within the nucleosome core and higher-order chromatin structure. Beta Tubulin cytoskeletal stain is shown in red, providing cellular architecture contrast to the nuclear histone signal. Nuclei are counterstained blue with DAPI, supporting the expected widespread nuclear distribution pattern of this core chromatin protein.



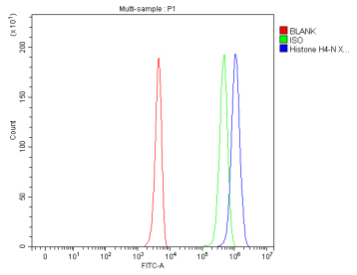
Histone H4 Antibody Multi-Species WB. Western blot analysis of human cell lysates and rodent tissue lysates using Histone H4 antibody. Lane 1: human HeLa cells, Lane 2: human 293T cells, Lane 3: human HepG2 cells, Lane 4: human HT1080 cells, Lane 5: rat kidney tissue, Lane 6: rat thymus tissue, Lane 7: mouse kidney tissue, Lane 8: mouse thymus tissue. A strong band is detected near 11-14 kDa, consistent with the predicted molecular weight range of Histone H4 / HIST1H4 family proteins. The slightly increased apparent molecular weight may reflect post-translational histone modifications including acetylation, phosphorylation, or methylation that alter electrophoretic mobility. Broad detection across human, rat, and mouse samples supports the highly conserved expression of this chromatin-associated nucleosome core protein.



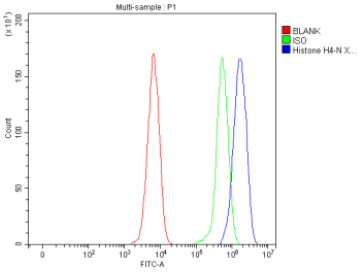
Histone H4 Antibody Breast Cancer IF. Immunofluorescence analysis of FFPE human breast cancer tissue using Histone H4 antibody. Histone H4 staining (red) demonstrates strong nuclear localization within tumor epithelial cells, consistent with the chromatin-associated distribution of HIST1H4 family proteins and nucleosome core components involved in epigenetic regulation and nuclear organization. Nuclei are counterstained blue with DAPI. Heat-mediated antigen retrieval was performed in pH8 EDTA buffer prior to staining. The observed widespread nuclear signal pattern aligns with the essential role of Histone H4 in chromatin structure maintenance within proliferative tumor tissue.



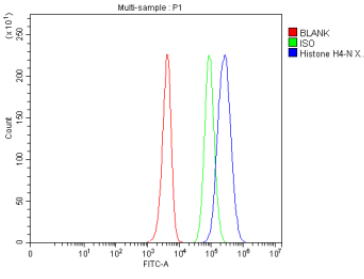
Histone H4 Antibody Breast Cancer IHC. Immunohistochemistry analysis of FFPE human breast cancer tissue using Histone H4 antibody. Tumor epithelial cells demonstrate strong HRP-DAB brown nuclear staining consistent with the chromatin-associated localization of Histone H4 and HIST1H4 family proteins within nucleosome core complexes. The staining pattern shows prominent nuclear compartmentalization with minimal cytoplasmic signal, aligning with the essential role of Histone H4 in chromatin organization, DNA packaging, and epigenetic regulation. Nuclei are counterstained blue.



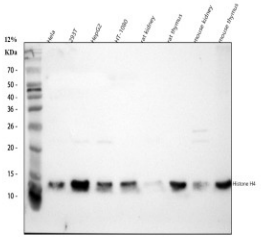
Histone H4 Antibody 293T FACS. Flow cytometry analysis of human 293T cells using Histone H4 antibody. The Histone H4-stained population (blue) demonstrates a clear positive fluorescence shift relative to the rabbit IgG isotype control (green) and unstained blank control (red), consistent with detection of this highly conserved nuclear nucleosome protein. Cells were fixed with 4% paraformaldehyde and permeabilized prior to intracellular staining to enable antibody access to chromatin-associated HIST1H4 family proteins. The observed signal pattern aligns with the widespread nuclear expression and chromatin localization expected for core histone H4 proteins.



Histone H4 Antibody C6 FACS. Flow cytometry analysis of rat C6 cells using Histone H4 antibody. The Histone H4-stained population (blue) demonstrates a clear positive fluorescence shift relative to the rabbit IgG isotype control (green) and unstained blank control (red), consistent with intracellular detection of chromatin-associated HIST1H4 family proteins. Cells were fixed and permeabilized prior to staining to allow antibody access to nuclear nucleosome components. The observed signal pattern aligns with the broad nuclear distribution expected for core histone H4 proteins involved in chromatin organization and epigenetic regulation.



Histone H4 Antibody HEPA1-6 FACS. Flow cytometry analysis of mouse HEPA1-6 cells using Histone H4 antibody. The Histone H4-stained population (blue) demonstrates a distinct fluorescence shift relative to the rabbit IgG isotype control (green) and unstained blank control (red), supporting intracellular detection of this conserved chromatin-associated nucleosome protein. Cells were fixed with paraformaldehyde and permeabilized prior to staining to facilitate antibody access to nuclear HIST1H4 family proteins. The staining profile is consistent with the widespread nuclear localization and chromatin structural role of Histone H4 in proliferating mammalian cells.



Histone H4 Antibody Human, Mouse and Rat WB. Western blot analysis was performed with Histone H4 Antibody on human HeLa, 293T, HepG2 and HT-1080 cell lysates (lanes 1-4), rat kidney and thymus tissue lysates (lanes 5-6), and mouse kidney and thymus tissue lysates (lanes 7-8). Samples were separated by 12% SDS-PAGE under reducing conditions, and the antibody was used at 0.05 ug/ml overnight at 4oC. A prominent band is detected at approximately 14 kDa, close to the expected molecular weight of approximately 11 kDa for Histone H4. This Histone H4 Antibody demonstrates detection of Histone H4 across human, mouse and rat samples.

Description

Histone H4 Antibody / Chromatin Structure Marker Antibody detects Histone H4, one of the four core histone proteins that form the nucleosome. Histone H4 is encoded by multiple highly conserved H4C genes and, together with Histone H3, forms an H3-H4 tetramer that associates with two H2A-H2B dimers to create the histone octamer. DNA wraps around this octamer to form the nucleosome, the fundamental structural unit of chromatin.

The organization of DNA into nucleosomes enables genomic DNA to be compacted while maintaining regulated access to genetic information. Chromatin structure is dynamically reorganized during transcription, DNA replication and DNA repair, processes that require changes in nucleosome positioning and accessibility. Histone H4 is therefore widely studied as a core component of chromatin and a marker of nuclear chromatin structure. A Histone H4 Antibody can support studies examining histone abundance, nucleosome organization and chromatin-associated processes.

The N-terminal tail of Histone H4 is subject to numerous post-translational modifications, including acetylation and methylation. These modifications can influence chromatin organization and interactions with chromatin-associated proteins, contributing to regulation of gene expression and other nuclear processes. Histone H4 also participates in interactions between neighboring nucleosomes that contribute to higher-order chromatin organization, making it an important target in epigenetics and chromatin biology.

Canonical Histone H4 is encoded by multiple closely related genes that produce the same or highly conserved Histone H4 protein. This Histone H4 Antibody recognizes Histone H4 associated with H4C1, H4C2, H4C3, H4C4, H4C5, H4C6, H4C8, H4C9, H4C11, H4C12, H4C13, H4C14, H4C15 and H4C16. Because of the high sequence conservation among these proteins, the antibody is suited to detection of total Histone H4 rather than discrimination among individual H4C gene products.

NSJ Bioreagents offers Histone H4 Antibody reagents for investigating this highly conserved component of the nucleosome. A Chromatin Structure Marker Antibody targeting Histone H4 can support research into nucleosome organization, chromatin structure, epigenetic regulation, transcription, DNA replication and DNA repair.

This antibody is part of our broader Histone H4 antibody collection, including acetylation, methylation, phosphorylation, and total H4 detection reagents for chromatin and epigenetics research.

Application Notes

Optimal dilution of the Histone H4 Antibody / Chromatin Structure Marker 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.

Alternate Names

Histone H4 antibody, H4 antibody, HIST1H4 antibody, multi gene histone H4 antibody

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