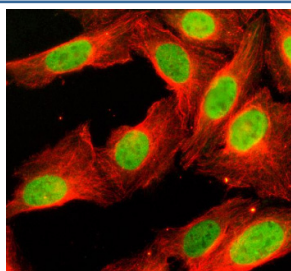


Histone H4 Antibody / Chromatin Structure Marker Antibody (FY12427)

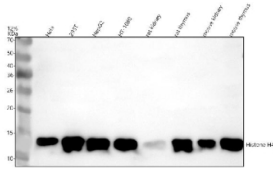
Catalog No.	Formulation	Size
FY12427	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

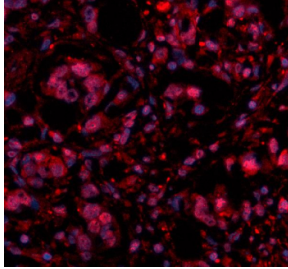
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	P62805
Applications	Western Blot : 0.25-0.5ug/ml 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 / Chromatin Structure Marker Antibody is available for research use only.



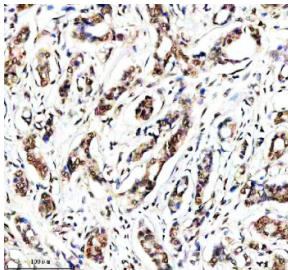
Histone H4 Antibody U2OS IF. Immunofluorescence analysis of human U2OS cells using Histone H4 antibody. Strong nuclear staining (green) is observed, consistent with chromatin-associated localization of Histone H4 and HIST1H4 family proteins within the nucleosome core and higher-order chromatin structure. 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.



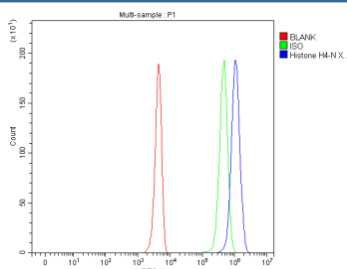
Histone H4 Antibody Multi-Species WB. Western blot analysis of human cell lysates and rodent tissue lysates using Histone H4 antibody. Lane 1: human HeLa cells, Lane 2: human 293T cells, Lane 3: human HepG2 cells, Lane 4: human HT1080 cells, Lane 5: rat kidney tissue, Lane 6: rat thymus tissue, Lane 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.



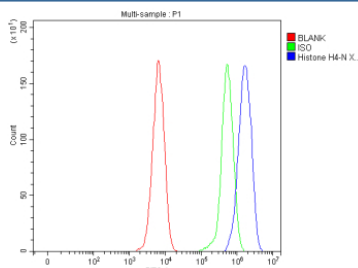
Histone H4 Antibody Breast Cancer IF. Immunofluorescence analysis of FFPE human breast cancer tissue using Histone H4 antibody. Histone H4 staining (red) demonstrates strong nuclear localization within tumor epithelial cells, consistent with the chromatin-associated distribution of HIST1H4 family proteins 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.



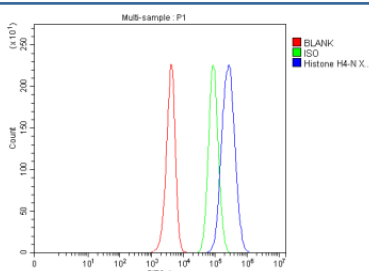
Histone H4 Antibody Breast Cancer IHC. Immunohistochemistry analysis of FFPE human breast cancer tissue using Histone H4 antibody. Tumor epithelial cells demonstrate strong HRP-DAB brown nuclear staining consistent with the chromatin-associated localization of Histone H4 and HIST1H4 family proteins within 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.

Description

Histone H4 is a highly conserved core nucleosomal histone protein encoded by multiple HIST1H4 family genes that functions as an essential structural component of chromatin. Histone H4 Antibody / Chromatin Structure Marker Antibody is useful for investigating nucleosome organization, chromatin remodeling, epigenetic regulation, and DNA packaging mechanisms. Histone H4 antibody, also referred to as H4 histone antibody, Core histone H4 antibody, HIST1H4 antibody, or Nucleosome protein antibody in the literature, recognizes one of the four canonical histone proteins responsible for formation of the nucleosome core particle. This rabbit polyclonal antibody supports research applications focused on chromatin architecture, transcriptional regulation, cell proliferation, and nuclear organization biology.

Histone H4 forms the nucleosomal octamer together with Histone H2A, Histone H2B, and Histone H3, creating the fundamental repeating structural unit of eukaryotic chromatin. Approximately 147 base pairs of DNA are wrapped around this histone octamer to generate nucleosomes that regulate chromatin accessibility and higher-order chromosome organization. Histone H4 is among the most evolutionarily conserved proteins in eukaryotic biology, reflecting its critical role in genomic stability, DNA replication, transcriptional control, and chromosome segregation. The amino-terminal tail of Histone H4 undergoes multiple post-translational modifications including acetylation, methylation, phosphorylation, ubiquitination, and citrullination that influence chromatin accessibility and epigenetic signaling states.

Histone H4 participates in numerous cellular processes associated with DNA damage repair, cell cycle progression, stem cell maintenance, differentiation, and transcriptional activation or repression. Dynamic chromatin remodeling involving Histone H4 modifications contributes to regulation of gene expression programs controlling development, immune signaling, apoptosis, senescence, and metabolic adaptation. Histone H4 acetylation states in particular are widely studied as markers of transcriptionally active chromatin and epigenetic remodeling. Because chromatin organization influences nearly every aspect of nuclear function, Histone H4 antibodies are broadly utilized in cell biology, cancer research, developmental biology, neuroscience, and epigenetics investigations.

Altered Histone H4 modification patterns and chromatin structure abnormalities have been associated with numerous disease states including cancer, neurodegenerative disorders, inflammatory diseases, and developmental syndromes. Dysregulated histone acetylation and methylation pathways may contribute to aberrant transcriptional programs, genomic instability, and tumor progression in multiple malignancies. Histone H4 signaling networks are therefore important targets in studies involving chromatin-modifying enzymes, histone deacetylase inhibitors, bromodomain proteins, and epigenetic therapeutic strategies. Because Histone H4 is broadly expressed in nucleated cells, it is also commonly used as a nuclear marker and chromatin-associated loading control in biochemical and imaging applications.

At the cellular level, Histone H4 demonstrates strong nuclear localization consistent with its role in nucleosome assembly and chromatin organization. Immunohistochemistry and immunofluorescence studies typically demonstrate diffuse or punctate nuclear staining patterns across proliferating and differentiated cell populations. Histone H4 expression is widely distributed throughout normal tissues and tumor samples due to its essential function in chromatin structure maintenance. This rabbit polyclonal Histone H4 antibody provides a useful approach for studying chromatin biology, nucleosome-associated signaling mechanisms, epigenetic regulation, and nuclear organization across diverse experimental systems.

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