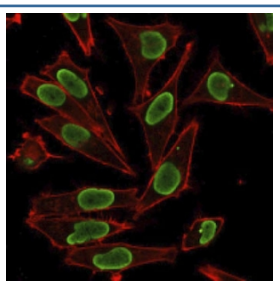
# Histone H1 Antibody / Chromatin Differentiation Linker Histone Antibody (V3323)

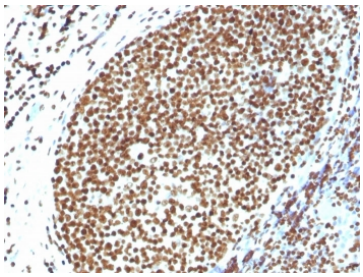
| Catalog No. | Formulation | Size |
|---|---|---|
| V3323-100UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 100 ug |
| V3323-20UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 20 ug |
| V3323SAF-100UG | 1 mg/ml in 1X PBS; BSA free, sodium azide free | 100 ug |

## Bulk quote request

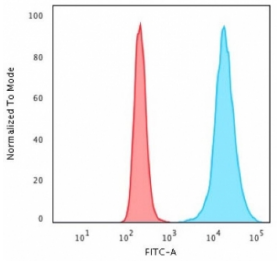
| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Purified |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Protein A affinity chromatography |
| **UniProt** | P07305 |
| **Localization** | Nuclear |
| **Applications** | Flow cytometry: 1-2ug/million cells<br>Immunofluorescence: 1-2ug/ml<br>Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT<br>Western blot: 1-2ug/ml |
| **Limitations** | This Histone H1 antibody is available for research use only. |



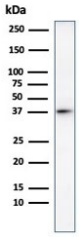
Histone H1 Antibody for IF. Immunofluorescence analysis of chromatin differentiation-associated histone H1 expression in PFA-fixed human HeLa cells using Histone H1 Antibody (green). Strong nuclear staining is observed, consistent with localization of linker histone H1 within chromatin and its role in dynamic chromatin remodeling during cellular differentiation. The staining pattern highlights uniform nuclear distribution reflecting chromatin-associated H1 across cells. Actin filaments are labeled with phalloidin (red), providing cytoskeletal contrast to the chromatin-associated histone signal.



Histone H1 Antibody for IHC. Immunohistochemistry analysis of chromatin differentiation-associated histone H1 expression in FFPE human tonsil tissue using Histone H1 Antibody. Nuclear HRP-DAB brown staining is observed in lymphoid cells, consistent with localization of linker histone H1 within chromatin and its role in dynamic chromatin remodeling during cellular differentiation. The staining highlights strong nuclear compartmentalization with minimal cytoplasmic signal, reflecting chromatin-associated distribution across actively remodeling chromatin states.




Flow cytometry testing of permeabilized human HeLa cells with Histone H1 antibody; Red=isotype control, Blue= Histone H1 antibody.




Western blot testing of human heart lysate with Histone H1 antibody. Observed molecular weight ~22/30-33 kDa (unmodified/modified).

## Description

Histone H1 is a linker histone that plays a central role in chromatin remodeling during cellular differentiation and developmental transitions. Histone H1 Antibody detects H1 protein associated with dynamic changes in chromatin organization that occur as cells transition from proliferative states to specialized functional identities. Unlike core histones that provide structural stability within nucleosomes, histone H1 regulates chromatin architecture at the level of linker DNA, making it a key mediator of large-scale chromatin reorganization during differentiation. This antibody is part of our broader Histone H1 antibody collection, including linker histone variants, chromatin organization, chromatin accessibility, and nuclear architecture reagents for chromatin and epigenetics research.

Histone H1 antibody, also referred to as H1 antibody or linker histone antibody in the literature, is widely used to investigate chromatin remodeling processes associated with development. During differentiation, chromatin undergoes extensive reorganization to establish lineage-specific gene expression patterns and structural genome organization. Histone H1 contributes to these changes by modulating nucleosome spacing, chromatin folding, and higher-order chromatin organization.

Mechanistically, histone H1 influences chromatin structure by binding to linker DNA at nucleosome entry and exit sites, stabilizing nucleosome arrays and regulating their spatial arrangement. During differentiation, redistribution of histone H1 across the genome contributes to the formation of distinct chromatin domains that support specialized cellular functions. These changes can involve both localized chromatin reorganization and global alterations in chromatin architecture.

Histone H1 levels and variant composition are dynamically regulated during development, with specific isoforms enriched in particular cell types or developmental stages. This dynamic regulation allows chromatin structure to be tailored to the functional requirements of different cell lineages. Changes in H1 abundance or distribution can therefore reflect shifts in chromatin organization associated with differentiation.

In addition to its structural role, histone H1 contributes to the establishment of stable chromatin states that support long-

term cellular identity. By influencing chromatin compaction and organization, histone H1 helps maintain the structural framework necessary for differentiated cells to preserve their functional state over time.

Detection of histone H1 in the context of chromatin differentiation provides insight into the structural reprogramming of chromatin that underlies developmental processes. This makes H1 antibodies valuable tools for studying lineage commitment, cellular maturation, and epigenetic regulation of genome organization.

A rabbit polyclonal antibody targeting histone H1 enables broad detection of linker histone associated with chromatin remodeling during differentiation, supporting studies of developmental chromatin

For additional information on linker histone H1 and a highly published monoclonal antibody, visit our Histone H1 Antibody AE-4 / Total Linker Histone H1 Chromatin Antibody page.organization and epigenetic regulation.

## Application Notes

Optimal dilution of the Histone H1 Antibody / Chromatin Differentiation Linker Histone Antibody should be determined by the researcher.

## Immunogen

Recombinant full-length human protein was used as the immunogen for the Histone H1 Antibody / Chromatin Differentiation Linker Histone Antibody.

## Storage

Store the Histone H1 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

## Alternate Names

Histone H1 antibody, H1 antibody, differentiation chromatin histone H1 antibody, developmental chromatin H1 antibody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