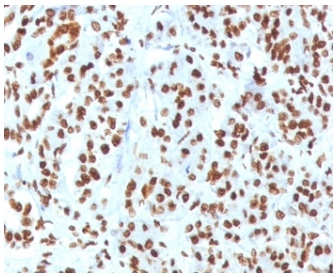
Histone H1 Antibody / Chromatin Accessibility Linker Histone Antibody [clone OSHT-3R] (V3689)

Catalog No.	Formulation	Size
V3689-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3689-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3689SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3689IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

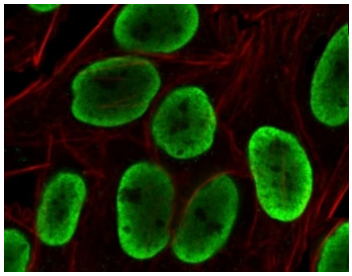
Recombinant RABBIT MONOCLONAL

Bulk quote request

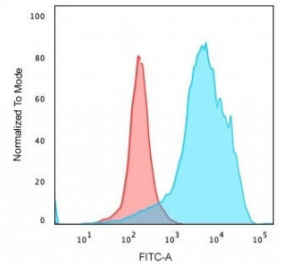
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	OSHT-3R
Purity	Protein A affinity chromatography
UniProt	P07305
Localization	Nuclear
Applications	Flow cytometry: 1-2ug/10^6 cells Immunofluorescence: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RTPrediluted IHC only format: incubate for 30 min at RT (1)
Limitations	This recombinant Histone H1 antibody is available for research use only.



Histone H1 Antibody for IHC. Immunohistochemistry analysis of chromatin accessibility-associated histone H1 expression in FFPE human pancreas tissue using Histone H1 Antibody. Nuclear HRP-DAB brown staining is observed in pancreatic epithelial cells, consistent with localization of linker histone H1 within chromatin and its role in regulating DNA packaging and chromatin accessibility. Clone OSHT-3R antibody demonstrates strong nuclear compartmentalization with minimal cytoplasmic staining, reflecting chromatin-associated distribution across regions of regulated DNA accessibility.



Histone H1 Antibody for IF. Immunofluorescence analysis of chromatin accessibility-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 regulating DNA packaging and chromatin accessibility. Clone OSHT-3R antibody demonstrates uniform nuclear enrichment with minimal cytoplasmic signal, reflecting chromatin-associated distribution across regions of regulated chromatin accessibility. Actin filaments are labeled with phalloidin (red), providing cytoskeletal contrast to the chromatin-associated histone signal.



Flow cytometry testing of PFA-fixed human HeLa cells with recombinant Histone H1 antibody (clone OSHT-3R); Red=isotype control, Blue= recombinant Histone H1 antibody.

Description

Histone H1 is a linker histone that plays a central role in regulating chromatin accessibility by controlling DNA packaging and higher-order chromatin organization. Histone H1 Antibody detects H1 protein associated with chromatin states that influence DNA accessibility, positioning histone H1 as a key regulator of how tightly DNA is packaged within the nucleus. This function distinguishes histone H1 from core histones by emphasizing its role in modulating genome accessibility rather than forming nucleosome structure. 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 study the relationship between chromatin structure and DNA accessibility. By binding to linker DNA between nucleosomes, histone H1 stabilizes nucleosome arrays and promotes chromatin compaction, thereby limiting access of cellular machinery to DNA. This regulatory function makes histone H1 an important determinant of genome accessibility at a global level.

Mechanistically, histone H1 influences chromatin accessibility through its effects on nucleosome arrangement and chromatin folding. Increased association of histone H1 is typically correlated with reduced DNA accessibility, while decreased H1 levels are associated with more open chromatin configurations. This dynamic balance allows chromatin to shift between more compact and more accessible states depending on cellular context.

Histone H1-mediated regulation of chromatin accessibility is essential for controlling genome interactions and maintaining proper chromatin organization. By modulating DNA packaging, histone H1 influences the ability of cellular factors to interact with chromatin, thereby contributing to regulation of genome function at the structural level.

The distribution of histone H1 across chromatin is highly dynamic and responsive to cellular conditions, including changes

in chromatin state and environmental signals. Redistribution of H1 can alter chromatin accessibility and impact genome organization, highlighting its role as a regulator of chromatin structure.

In contrast to chromatin condensation-focused roles of histone H1, its function in chromatin accessibility emphasizes the balance between DNA compaction and structural flexibility. This distinction is important for understanding how chromatin structure supports both genome stability and regulated genome interactions.

A recombinant rabbit monoclonal antibody targeting histone H1 enables specific and consistent detection of linker histone involved in chromatin accessibility regulation, supporting studies of chromatin structure, genome organization, and DNA accessibility dynamics.

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.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Histone H1 Antibody / Chromatin Accessibility Linker Histone Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

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

Storage

Store the recombinant 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, chromatin accessibility histone H1 antibody, linker histone accessibility antibody

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