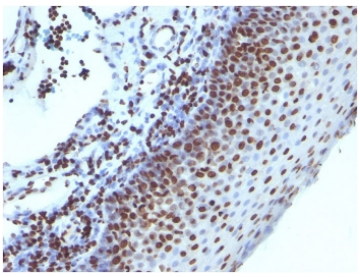
Histone H1 Antibody 1415-1 / Nucleosome Spacing Linker DNA Antibody [clone 1415-1] (V2567)

Catalog No.	Formulation	Size
V2567-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2567-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2567SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2567IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

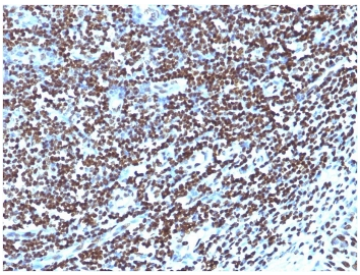
Citations (4)

Bulk quote request

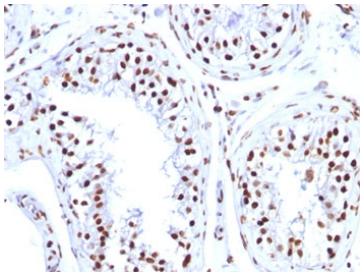
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	1415-1
Purity	Protein G affinity chromatography
UniProt	P07305
Localization	Nuclear
Applications	Flow cytometry: 1-2ug/million cells Immunofluorescence: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Western blot: 1-2ug/ml
Limitations	This Histone antibody is available for research use only.



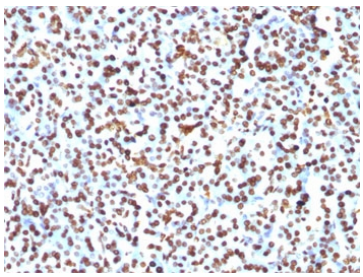
Histone H1 Antibody 1415-1 in Human Tonsil IHC. Immunohistochemistry testing of clone 1415-1 in FFPE human tonsil tissue. Strong nuclear HRP-DAB staining is observed in lymphoid cells, consistent with the localization of linker histone H1 within chromatin and its role in linker DNA organization and nucleosome spacing.



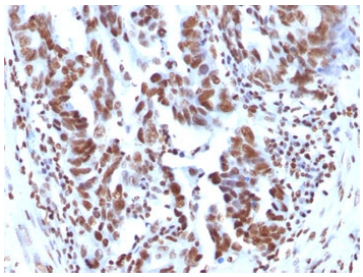
Histone H1 Antibody 1415-1 in Human Tonsil Tissue IHC. Immunohistochemistry testing of clone 1415-1 in FFPE human tonsil tissue. Prominent nuclear immunoreactivity is observed throughout the lymphoid tissue, consistent with the chromatin-associated localization of histone H1 and its function in linker DNA and nucleosome organization.



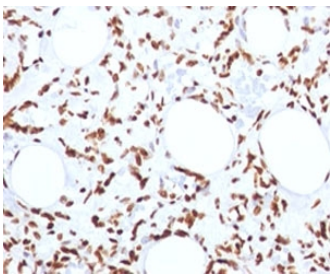
Histone H1 Antibody 1415-1 in Human Testicular Carcinoma IHC. Immunohistochemistry testing of clone 1415-1 in FFPE human testicular carcinoma tissue. Strong nuclear staining is observed in tumor cells, consistent with the association of linker histone H1 with chromatin and nucleosome organization.



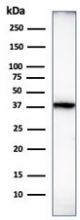
Histone H1 Antibody 1415-1 in Human Pancreas IHC. Immunohistochemistry testing of clone 1415-1 in FFPE human pancreas tissue. Nuclear immunoreactivity is observed throughout the tested tissue, consistent with the localization of linker histone H1 to chromatin and its role in nucleosome spacing.



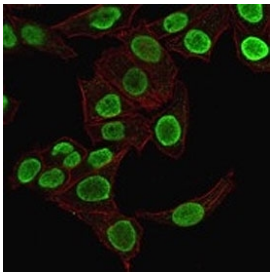
Histone H1 Antibody 1415-1 in Human Ovarian Carcinoma IHC. Immunohistochemistry testing of clone 1415-1 in FFPE human ovarian carcinoma tissue. Strong nuclear immunoreactivity is observed in tumor cells, demonstrating the expected chromatin-associated distribution of linker histone H1.



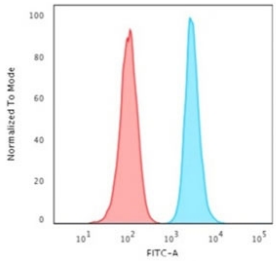
Histone H1 Antibody 1415-1 in Human Angiosarcoma IHC. Immunohistochemistry testing of clone 1415-1 in FFPE human angiosarcoma tissue. Prominent nuclear staining is observed in tumor cells, consistent with the localization of linker histone H1 within chromatin.



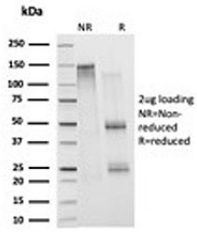
Histone H1 Antibody 1415-1 in Human Heart WB. Western blot testing of clone 1415-1 in human heart tissue lysate. Immunoreactive bands are observed within the approximately 22-33 kDa range associated with members of the linker histone H1 family. The banding pattern is consistent with the presence of multiple histone H1 variants and their heterogeneous electrophoretic mobility.



Histone H1 Antibody 1415-1 in Human HeLa Cervical Cancer Cells IF. Immunofluorescence testing of fixed human HeLa cervical cancer cells with clone 1415-1 (green). Strong nuclear staining is observed, consistent with the localization of linker histone H1 within chromatin and its role in linker DNA organization and nucleosome spacing. Actin filaments are labeled with phalloidin (red).



Histone H1 Antibody 1415-1 in Human HeLa Cervical Cancer Cells FACS. Flow cytometry testing of fixed human HeLa cervical cancer cells with clone 1415-1 for detection of linker histone H1. The antibody-stained population is shown in blue and the isotype control in red, demonstrating detection of the chromatin-associated histone H1 target.



Purified Histone H1 Antibody 1415-1 SDS-PAGE. Electrophoretic analysis of purified, BSA-free clone 1415-1 by SDS-PAGE demonstrates the protein profile of the mouse monoclonal antibody and provides confirmation of antibody integrity and purity.

Description

Histone H1 is a linker histone that plays a central role in regulating nucleosome spacing and linker DNA organization within chromatin. Histone H1 Antibody 1415-1 detects H1 protein associated with the positioning and spacing of nucleosomes along DNA, providing insight into chromatin architecture at the level of nucleosome array organization. Unlike core histones that form the nucleosome core particle, histone H1 binds to linker DNA and directly influences how nucleosomes are arranged across the genome. 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 chromatin structure at the level of nucleosome spacing and organization. By binding to DNA at the entry and exit sites of the nucleosome, histone H1 stabilizes linker DNA and helps define the distance between adjacent nucleosomes, commonly referred to as nucleosome repeat length. This function makes histone H1 a key regulator of chromatin organization beyond the nucleosome core.

Clone 1415-1 antibody is designed to detect histone H1 and has been referenced in multiple published studies, supporting its use in chromatin research applications. Clone 1415-1 antibody provides reliable detection of linker histone

H1 in the context of nucleosome organization, making it particularly useful for investigating chromatin spacing and structural chromatin features across different experimental systems.

Mechanistically, histone H1 contributes to the establishment of regular nucleosome spacing by constraining DNA geometry at nucleosome boundaries. This promotes ordered chromatin arrays and ensures consistent nucleosome positioning across genomic regions. Proper nucleosome spacing is essential for maintaining chromatin integrity and influences DNA accessibility for processes such as replication, repair, and transcription.

In contrast to chromatin condensation-focused roles of histone H1, its function in nucleosome spacing represents a distinct organizational layer of chromatin regulation. Rather than simply promoting compaction, histone H1 defines the physical arrangement of nucleosomes, thereby shaping chromatin architecture at a fundamental level. This distinction is important for differentiating chromatin density from chromatin organization.

Alterations in histone H1 levels or distribution can lead to irregular nucleosome spacing, resulting in disrupted chromatin structure and altered genome organization. These changes can affect chromatin accessibility and influence downstream biological processes, highlighting the importance of H1 in maintaining balanced chromatin architecture.

Histone H1 is dynamically regulated across cell types, developmental stages, and chromatin contexts, reflecting its role in adapting chromatin structure to cellular needs. Detection of histone H1 in the context of nucleosome spacing provides valuable insight into chromatin organization and structural variability across the genome.

A mouse monoclonal antibody such as clone 1415-1 enables reliable detection of linker histone associated with nucleosome spacing and chromatin organization, supporting studies of chromatin architecture, DNA packaging, and genome structure.

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

Optimal dilution of the Histone H1 Antibody / Nucleosome Spacing Linker DNA Antibody should be determined by the researcher.

1. Staining of formalin/paraffin tissues requires boiling tissue sections in 10mM Citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 min.
2. 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.
3. View the recombinant form of this Histone H1 antibody.

Immunogen

Nuclei of human leukemia biopsy cells were used as the immunogen for the Histone H1 Antibody / Nucleosome Spacing Linker DNA Antibody.

Storage

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

Alternate Names

Histone H1 antibody, H1 antibody, nucleosome spacing histone H1 antibody, linker DNA histone H1 antibody

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