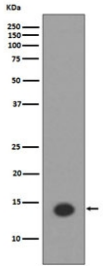
Acetyl-Histone H2A Antibody Lys9 / HIST1H2A Chromatin Accessibility Antibody [clone DEB-8] (RQ5085)

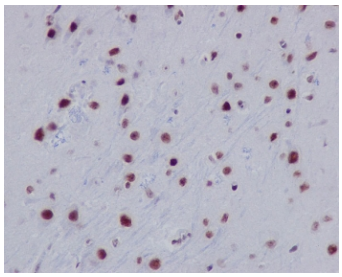
Catalog No.	Formulation	Size
RQ5085	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	DEB-8
Purity	Affinity purified
UniProt	P04908
Localization	Nuclear
Applications	Western blot: 1:500-1:2000 Immunohistochemistry (FFPE): 1:500-1:1000
Limitations	This Acetyl-Histone H2A Antibody (Lys9) is available for research use only.



Acetyl-Histone H2A Antibody Lys9 / HIST1H2A Chromatin Accessibility Antibody (clone DEB-8) for WB. Western blot analysis of HIST1H2A / Histone H2A Lys9 acetylation (H2AK9ac) in human HeLa cell lysate treated with Trichostatin A using Acetyl-Histone H2A Antibody Lys9 / HIST1H2A Chromatin Accessibility Antibody. A band is detected at the predicted molecular weight of approximately 14 kDa corresponding to acetylated Histone H2A, consistent with increased chromatin accessibility and histone acetylation following HDAC inhibition.



Acetyl-Histone H2A Antibody Lys9 / HIST1H2A Chromatin Accessibility Antibody (clone DEB-8) for IHC. Immunohistochemistry of HIST1H2A / Histone H2A Lys9 acetylation (H2AK9ac) in mouse brain tissue. Formalin-fixed, paraffin-embedded mouse brain sections show strong HRP-DAB brown nuclear staining in neuronal and glial cells, consistent with nuclear localization of acetylated Histone H2A and chromatin accessibility. Heat-induced epitope retrieval was performed using pH6 citrate buffer.

Description

Histone H2A (HIST1H2A) acetylation at lysine 9 is a key chromatin modification associated with increased chromatin accessibility and transcriptional activation. Acetyl-Histone H2A Antibody Lys9 / HIST1H2A Chromatin Accessibility Antibody (clone DEB-8) is designed to detect Histone H2A acetylated at lysine 9, providing a marker of open chromatin and transcriptionally permissive genomic regions. Included within the Histone H2A antibodies collection, this antibody enables analysis of histone modification patterns and chromatin regulatory mechanisms involving H2A and its variants.

HIST1H2A antibody, also referred to as Histone H2A antibody and H2AK9ac antibody in the literature, recognizes a modification that directly alters histone-DNA interactions. Acetylation neutralizes the positive charge of lysine residues, weakening nucleosome-DNA binding and promoting chromatin relaxation. This distinguishes H2A acetylation from methylation-based marks that primarily regulate chromatin through protein recruitment.

This recombinant rabbit monoclonal clone DEB-8 antibody is uniquely positioned for studies of chromatin accessibility and transcriptional activation. H2A lysine 9 acetylation is enriched at active promoters, enhancers, and regulatory regions where transcription factors and co-activators are recruited.

At the molecular level, H2AK9ac facilitates recruitment of bromodomain-containing proteins and chromatin remodeling complexes that further enhance transcriptional activation. It often functions in coordination with acetylation marks on histones H3 and H4 to establish permissive chromatin domains.

This modification is widely distributed across euchromatin and reflects global chromatin accessibility rather than site-specific regulatory events. Its presence indicates regions of active or potential gene expression.

In western blot applications, the antibody detects Histone H2A at approximately 14 kDa, with signal corresponding to acetylated chromatin associated with transcriptional activation. Detection reflects open chromatin states rather than repressive or structurally compact chromatin.

At the cellular level, H2A lysine 9 acetylation localizes to the nucleus and is enriched in transcriptionally active regions. This supports its use in studying chromatin accessibility and gene activation.

This antibody supports detection of Lys9-acetylated Histone H2A, enabling investigation of chromatin accessibility, transcriptional activation, and epigenetic regulation of gene expression.

Application Notes

Optimal dilution of the Acetyl-Histone H2A Antibody (Lys9) should be determined by the researcher.

Immunogen

A synthetic peptide specific to human Histone H2A (surrounding acetylated lysine 9) was used as the immunogen for the

Acetyl-Histone H2A Antibody Lys9 / HIST1H2A Chromatin Accessibility Antibody.

Storage

Store the Acetyl-Histone H2A Antibody (Lys9) at -20oC.

Alternate Names

Histone H2A Lys9 acetylation antibody, H2AK9ac chromatin activation antibody, acetyl histone H2A Lys9 antibody, H2A K9 acetyl histone antibody

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