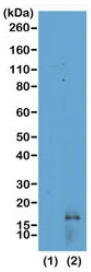
H3K14me2 Antibody / HIST1H3A Chromatin Plasticity Regulation Antibody [clone RM165] (R20212)

Catalog No.	Formulation	Size
R20212-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20212-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25 ug

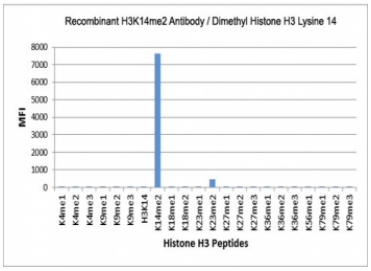
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM165
Purity	Protein A purified from animal origin-free supernatant
UniProt	P84243
Gene ID	8350
Applications	Western blot: 0.25-1ug/ml ELISA: 0.2-1ug/ml
Limitations	This H3K14me2 antibody is available for research use only.



H3K14me2 Antibody / HIST1H3A Chromatin Plasticity Regulation Antibody (clone RM165) for WB. Western blot analysis of HIST1H3A / Histone H3 Lys14 dimethylation (K14me2) in (1) recombinant Histone H3.3 and (2) acid extracts of human HeLa cells using H3K14me2 Antibody / HIST1H3A Chromatin Plasticity Regulation Antibody. A band is detected at the predicted molecular weight of approximately 15 kDa corresponding to dimethylated Histone H3, consistent with chromatin states associated with regulatory plasticity and dynamic gene expression control.



H3K14me2 Antibody / HIST1H3A Chromatin Plasticity Regulation Antibody (clone RM165) specificity analysis. Peptide binding assay demonstrating selective recognition of HIST1H3A / Histone H3 Lys14 dimethylation (K14me2). Strong signal is observed exclusively with the K14me2 peptide, while no detectable reactivity is seen with non-modified Lys14 (H3K14), monomethylated (K14me1), trimethylated (K14me3), or other methylated histone H3 peptides, confirming high specificity for the dimethylated Lys14 state associated with chromatin plasticity and dynamic gene regulation.

Description

Histone H3 (HIST1H3A) methylation at lysine 14 represents a regulatory chromatin modification associated with dynamic gene expression and chromatin plasticity. H3K14me2 Antibody / HIST1H3A Chromatin Plasticity Regulation Antibody (clone RM165) is designed to detect Histone H3 dimethylated at lysine 14, providing a marker of chromatin states that enable flexible and context-dependent gene regulation. This antibody is part of a broader collection of Histone H3 antibodies used to study chromatin structure, histone modifications, and epigenetic regulation.

HIST1H3A antibody, also referred to as Histone H3 antibody and H3K14me2 antibody in the literature, recognizes a modification that occupies a distinct regulatory position relative to acetylation at the same residue. While H3K14ac is strongly associated with transcriptional activation, H3K14me2 reflects chromatin configurations that support regulatory adaptability rather than direct activation.

This recombinant rabbit monoclonal clone RM165 antibody is uniquely positioned for studies of chromatin plasticity and regulatory responsiveness. H3K14 dimethylation is commonly associated with genomic regions that undergo dynamic transitions in response to signaling pathways, environmental stimuli, and developmental cues.

At the molecular level, H3K14me2 contributes to chromatin configurations that facilitate interactions between histones and regulatory proteins, supporting dynamic remodeling of chromatin structure. It participates in combinatorial histone modification patterns that define gene expression potential and regulatory flexibility.

This modification often coexists with both activating and repressive marks, reflecting its role as an integrative signal within complex epigenetic landscapes. Its presence indicates chromatin capable of shifting between transcriptional states rather than remaining fixed.

In western blot applications, the antibody detects Histone H3 at approximately 15 kDa, with signal corresponding to dimethylated chromatin associated with regulatory chromatin states. Detection reflects chromatin plasticity rather than promoter activation, gene body elongation, or stable repression.

At the cellular level, H3K14 dimethylation localizes to the nucleus and is enriched in euchromatic regions undergoing dynamic regulation. This distinguishes it from strongly activating acetylation marks and from repressive methylation states.

This antibody supports detection of Lys14-dimethylated Histone H3, enabling investigation of chromatin plasticity, regulatory flexibility, and epigenetic control of gene expression dynamics.

Application Notes

The stated application concentrations are suggested starting points. Titration of the H3K14me2 Antibody / HIST1H3A Chromatin Plasticity Regulation Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A dimethyl-peptide corresponding to Dimethyl-Histone H3 (Lys14) was used as the immunogen for this H3K14me2

Antibody / HIST1H3A Chromatin Plasticity Regulation Antibody.

Storage

Store the recombinant H3K14me2 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

Histone H3 Lys14 dimethylation antibody, H3K14me2 chromatin plasticity antibody, histone H3 di methyl Lys14 antibody, H3K14 dimethyl histone antibody

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