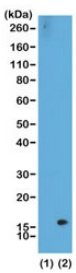
H3K36me2 Antibody / HIST1H3A Gene Body Chromatin Maintenance Antibody [clone RM141] (R20203)

Catalog No.	Formulation	Size
R20203-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20203-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25 ug

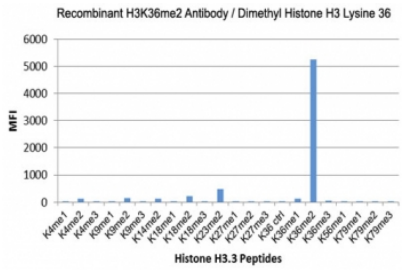
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM141
Purity	Protein A purified from animal origin-free supernatant
UniProt	P84243
Gene ID	8350
Applications	Western Blot : 0.5-2ug/ml ELISA : 0.2-1ug/ml
Limitations	This H3K36me2 antibody is available for research use only.



H3K36me2 Antibody / HIST1H3A Gene Body Chromatin Maintenance Antibody (clone RM141) for WB. Western blot analysis of HIST1H3A / Histone H3 Lys36 dimethylation (K36me2) in (1) recombinant Histone H3.3 and (2) acid extracts of human HeLa cells using H3K36me2 Antibody / HIST1H3A Gene Body Chromatin Maintenance Antibody. A band is detected at the predicted molecular weight of approximately 15 kDa corresponding to dimethylated Histone H3, consistent with gene body-associated chromatin and transcriptional maintenance across coding regions.



H3K36me2 Antibody / HIST1H3A Gene Body Chromatin Maintenance Antibody (clone RM141) specificity analysis. Peptide binding assay demonstrating selective recognition of HIST1H3A / Histone H3 Lys36 dimethylation (K36me2). Strong signal is observed exclusively with the K36me2 peptide, while no detectable reactivity is seen with non-modified Lys36 (K36 Ctrl), monomethylated (K36me1), trimethylated (K36me3), or other methylated histone H3 peptides, confirming high specificity for the dimethylated Lys36 state associated with gene body chromatin maintenance and transcriptional continuity.

Description

Histone H3 (HIST1H3A) methylation at lysine 36 is a key regulator of transcriptional elongation and gene body chromatin organization. Dimethylation at lysine 36 represents a broadly distributed chromatin modification associated with transcriptional maintenance and preservation of gene body integrity. H3K36me2 Antibody / HIST1H3A Gene Body Chromatin Maintenance Antibody (clone RM141) is designed to detect Histone H3 dimethylated at lysine 36, providing a marker of chromatin states that support ongoing transcription across coding regions. 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 H3K36me2 antibody in the literature, recognizes a modification enriched throughout gene bodies rather than confined to promoter or enhancer regions. This distribution distinguishes H3K36me2 from H3K36me1, which reflects early elongation, and H3K36me3, which marks highly active transcriptional elongation domains. H3K36me2 occupies an intermediate but stable position within this methylation hierarchy.

This recombinant rabbit monoclonal clone RM141 antibody is uniquely positioned for studies of transcriptional maintenance and chromatin continuity. H3K36 dimethylation is associated with sustained transcriptional activity and contributes to maintaining chromatin organization during RNA polymerase II progression.

At the molecular level, H3K36me2 plays a role in suppressing cryptic transcription initiation within gene bodies by reinforcing chromatin structure. It also contributes to coordination of histone modifications and chromatin remodeling processes that preserve transcriptional fidelity.

This modification provides a genome-wide view of transcriptionally engaged chromatin rather than localized regulatory events. Its presence reflects stability and continuity of gene expression rather than transient activation.

In western blot applications, the antibody detects Histone H3 at approximately 15 kDa, with signal corresponding to dimethylated chromatin within gene bodies. Detection reflects transcriptional maintenance rather than promoter activation or enhancer signaling.

At the cellular level, H3K36 dimethylation localizes to the nucleus and is enriched in euchromatic regions associated with active genes. This distribution supports its use in studying gene body chromatin organization and transcriptional stability.

This antibody supports detection of Lys36-dimethylated Histone H3, enabling investigation of transcriptional maintenance, chromatin organization across gene bodies, and epigenetic regulation of gene expression fidelity.

Application Notes

The stated application concentrations are suggested starting points. Titration of the H3K36me2 Antibody / HIST1H3A Gene Body Chromatin Maintenance Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A dimethyl-peptide corresponding to Dimethyl-Histone H3 (Lys36) was used as the immunogen for this H3K36me2

Antibody / HIST1H3A Gene Body Chromatin Maintenance Antibody.

Storage

Store the recombinant H3K36me2 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

Histone H3 Lys36 dimethylation antibody, H3K36me2 gene body antibody, histone H3 di methyl Lys36 antibody, H3K36 dimethyl histone antibody