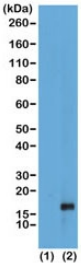
H3K79me1 Antibody / HIST1H3A Transcription-Linked Gene Body Methylation Antibody [clone RM147] (R20207)

Catalog No.	Formulation	Size
R20207-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug
R20207-25UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	25 ug

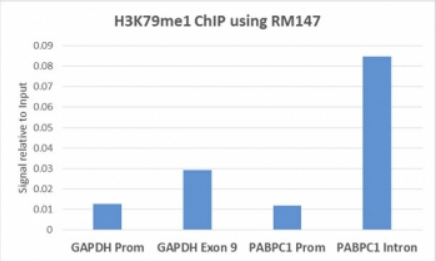
Recombinant RABBIT MONOCLONAL

Bulk quote request

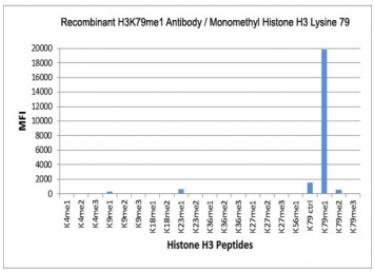
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM147
Purity	Protein A purified from animal origin-free supernatant
UniProt	P84243
Gene ID	8350
Applications	Western Blot : 0.2-1ug/ml ChIP : 2-10ug/mg of lysate ELISA : 0.2-1ug/ml
Limitations	This recombinant H3K79me1 antibody is available for research use only.



H3K79me1 Antibody / HIST1H3A Transcription-Linked Gene Body Methylation Antibody (clone RM147) for WB. Western blot analysis of HIST1H3A / Histone H3 Lys79 monomethylation (K79me1) in (1) recombinant Histone H3.3 and (2) acid extracts of human HeLa cells using H3K79me1 Antibody / HIST1H3A Transcription-Linked Gene Body Methylation Antibody. A band is detected at the predicted molecular weight of approximately 15 kDa corresponding to monomethylated Histone H3, consistent with gene body-associated chromatin marking transcription-linked regulatory states.



H3K79me1 Antibody / HIST1H3A Transcription-Linked Gene Body Methylation Antibody (clone RM147) for ChIP. Chromatin immunoprecipitation analysis of HIST1H3A / Histone H3 Lys79 monomethylation (K79me1) in human HeLa cells using H3K79me1 Antibody / HIST1H3A Transcription-Linked Gene Body Methylation Antibody (5 ug). Quantitative PCR shows enrichment within gene body regions including GAPDH Exon 9 and PABPC1 intronic regions relative to promoter regions, consistent with H3K79me1 marking transcription-associated chromatin across coding regions.



H3K79me1 Antibody / HIST1H3A Transcription-Linked Gene Body Methylation Antibody (clone RM147) specificity analysis. Peptide binding assay demonstrating selective recognition of HIST1H3A / Histone H3 Lys79 monomethylation (K79me1). Strong signal is observed exclusively with the K79me1 peptide, while no detectable reactivity is seen with dimethylated (K79me2), trimethylated (K79me3), or other methylated histone H3 peptides, confirming high specificity for the monomethylated Lys79 state associated with transcription-linked gene body chromatin.

Description

Histone H3 (HIST1H3A) methylation at lysine 79 represents a distinctive epigenetic modification associated with gene body chromatin and transcription-linked regulatory processes. H3K79me1 Antibody / HIST1H3A Transcription-Linked Gene Body Methylation Antibody (clone RM147) is designed to detect Histone H3 monomethylated at lysine 79, providing a marker of chromatin states associated with active or permissive transcriptional 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 H3K79me1 antibody in the literature, recognizes a methylation site located within the globular core domain of Histone H3 rather than the N-terminal tail. This intranucleosomal positioning distinguishes Lys79 methylation from tail-based modifications such as H3K4me1 or H3K9me1 and contributes to its unique functional role in regulating chromatin structure within gene bodies.

This recombinant rabbit monoclonal clone RM147 antibody is uniquely positioned for studies of transcription-linked gene body methylation rather than enhancer priming or promoter activation. Compared with acetylation-based gene body marks such as H3K36ac or H3K79ac, H3K79me1 provides a methylation-based perspective on chromatin states associated with transcriptional continuity and chromatin organization across coding regions.

At the molecular level, H3K79 monomethylation is deposited by the methyltransferase DOT1L and is associated with transcriptionally active chromatin. It contributes to chromatin environments that support gene expression while maintaining structural integrity of nucleosomes during transcription.

H3K79 methylation exists in mono-, di-, and tri-methyl forms, each associated with different regulatory outcomes. The monomethylated state reflects an intermediate chromatin configuration that supports transcription without the stronger activation or specialization associated with higher methylation states.

In western blot applications, the antibody detects Histone H3 at approximately 15 kDa, with signal corresponding to monomethylated chromatin within transcription-associated regions. Detection reflects gene body methylation rather than enhancer activation or promoter-proximal chromatin states.

At the cellular level, H3K79 monomethylation localizes to the nucleus and is enriched in euchromatic domains corresponding to expressed genes. This distribution supports its use in studying transcription-linked chromatin regulation and gene body methylation architecture.

This antibody supports detection of Lys79-monomethylated Histone H3, enabling investigation of DOT1L-mediated methylation, transcription-associated chromatin regulation, and epigenetic control of gene body structure.

Application Notes

The stated application concentrations are suggested starting points. Titration of the H3K79me1 Antibody / HIST1H3A Transcription-Linked Gene Body Methylation Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A monomethyl-peptide corresponding to Monomethyl-Histone H3 (Lys79) was used as the immunogen for this H3K79me1 Antibody / HIST1H3A Transcription-Linked Gene Body Methylation Antibody.

Storage

Store the recombinant H3K79me1 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

Histone H3 Lys79 monomethylation antibody, H3K79me1 gene body antibody, histone H3 mono methyl Lys79 antibody, transcription-linked chromatin antibody