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www.rockland.com
tech@rockland.com
+1 484.791.3823

Datasheet for 200-401-M74

Histone H3 K27 methyl Antibody

Overview

Description:	Anti-Histone H3 [methyl Lys27] (RABBIT) Antibody - 200-401-M74
Item No.:	200-401-M74
Size:	50 µg
Applications:	Dot Blot
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:

The nucleosome is comprised of 146 bp of DNA wrapped around a series of histone proteins arranged as an octamer consisting of 2 copies of histone H2A, H2B, H3 and H4. Within the nucleosome core the histone proteins are covalent modified at specific residues predominantly within the N-terminal tail including lysine (acetylation, methylation, SUMOylation, and ubiquitinylation), arginine methylation and citrullination, serine and threonine phosphorylation, as well as proline isomerization. The lysine side chains can carry up to three methyl groups (mono-, di- and tri- methylated forms) and the arginine side chain can be monomethylated or can be dimethylated as the symmetric or asymmetric forms. The modifications show temporal, disease-specific, and other types of cell-specific regulation and there are specific families of enzymes that regulate the methylation, demethylation, acetylation, deacetylation and other modifications. Research has indicated that whereas the histone mark H3K4Me3 (tri-methyl lysine 4 of histone H3) localizes to gene promoter regions (it is associated with transcriptional activation) other modifications at H3K4 such as monomethyl is present predominantly at enhancer sequences. Specific marks have been shown to be associated with the activation (H3K9Me1, H3K27Me1, and H4K20Me1) or repression (H3K9Me2 and Me3, H3K27Me2 and Me3, and H4K20Me2 and Me3) of genes. Monomethylation of H4 at K20, catalyzed by SET8, is essential to genome replication and stability. Multiple DNA breaks are associated with demethylation at this site, resulting in activation of p53 to avoid mitosis and aberrant chromosomal activity. In mammalian stem cells, Xist expression blocks the formation of H4K20me1, which is one of the first examples of a direct connection between chromatin and stem cell differentiation. Anti-Histone H3 are ideal for researchers interested in Chromatin Research, Epigenetics, Chromatin Modifiers, Histones and Modified Histones, and Phospho Specific research.

Synonyms:	rabbit anti-Histone H3 methyl Lys27 antibody, rabbit anti-Histone H3 K27 antibody, H3.3B, H3 histone, family 3A, H3.3AH3F3H3F3B, histone H3.3, MGC87783, MGC87782, H3R2me1, H3R2me2, H3R2me3
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST2H3C
Reactivity:	Human
PTM Specificity:	Methylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Histone H3 K27 methyl Antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide surrounding the K27 me3 site of human Histone H3.
Purity/Specificity:	Histone H3 K27 Methyl Antibody was purified from monospecific antiserum by protein A chromatography. This antibody recognizes the Me1, Me2, Me3, and acetylated form of Lys27 for human Histone H3. A BLAST analysis was used to suggest cross-reactivity with Human, mouse, rat, and C. elegans based on 100% sequence homology. Cross-reactivity with Histone H3 [methyl Lys27] from other sources has not been determined.
Relevant Links:	• UniProtKB - Q71DI3 • NCBI - NP_001005464.1 • GeneID - 126961

Application Details

Tested Applications:	Dot Blot
Application Note:	Anti-Histone H3 K27 Methyl Antibody has been tested by dot blot and is suitable for ELISA and Western Blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~15.4kDa corresponding to the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
WB:	1:1000

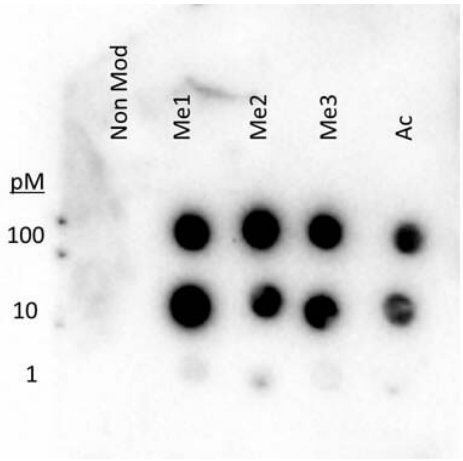
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.99 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Dot Blot
Dot Blot of Rabbit Histone H3 K27 me1-3 ac Antibody. Lane 1: Unmodified. Lane 2: me1. Lane 3: me2. Lane 4: me3. Lane 5: ac. Load: 1, 10, and 100 picomoles of peptide. Primary antibody: Histone H3 [1-3 methyl, Lys27, ac] antibody at 0.5µg/ml for 45 min at 4°C. Secondary antibody: Dylight™488 rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C.

Disclaimer

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