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Datasheet for 600-401-K01

Histone H3 K4me2/phospho T6 Antibody

Overview

Description:	Anti-Histone H3 [Dimethyl Lys4/pT6] (RABBIT) Antibody - 600-401-K01
Item No.:	600-401-K01
Size:	50 µg
Applications:	ChIP, Dot Blot, IF, WB
Reactivity:	Human, Mouse, Rat, C. elegans
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 dimethyl Lys4 pT6 antibody, H3.3B, H3 histone, family 3A, H3.3AH3F3H3F3B, histone H3.3, MGC87783, MGC87782, H3K4me2pT6

Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST2H3C
Reactivity:	Human, Mouse, Rat, C. elegans
PTM Specificity:	Dual Modification
Immunogen Type:	Conjugated Peptide
Immunogen:	Histone H3 [Dimethyl Lys4/pT6] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide surrounding the K4me2/pT6 site of human Histone H3.
Purity/Specificity:	Anti-Histone H3 [Dimethyl Lys4/pT6] was affinity purified from monospecific antiserum by immunoaffinity chromatography. 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 [Dimethyl Lys4/pT6] from other sources has not been determined.
Relevant Links:	• UniProtKB - Q71DI3

Application Details

Tested Applications:	ChIP, Dot Blot, IF, WB
Application Note:	Anti-Histone H3 [Dimethyl Lys4/pT6] antibody is tested for CHIP, immunocytochemistry, dot blot, 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. Epi-Plus™ antibody production in collaboration with Novus Biologicals.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1: 10,000
IF:	1:50
IHC:	1:50
IP:	1:100
WB:	1:500

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Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.31 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
Stabilizer:	30% Glycerol

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.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.