Datasheet for ABIN5706792

anti-Histone 3 antibody (H3K4me2, H3R2me2s)

5 Images

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Overview

Quantity:	50 µg
Target:	Histone 3 (H3)
Binding Specificity:	H3K4me2, H3R2me2s
Reactivity:	Human, Mouse, C. elegans
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Histone 3 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Chromatin Immunoprecipitation (ChIP), Dot Blot (DB), Multiplex Assay (MA), Fluorescence Microscopy (FM)

Product Details

Purpose:	Histone H3 R2me2s/K4me2 Antibody
Immunogen:	Immunogen: Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with synthetic dimethylated/dimethylated peptides surrounding Arginine 2 / Lysine 4 of human Histone H3.2. Immunogen Type: Conjugated Peptide
Isotype:	IgG
Cross-Reactivity (Details):	This antibody reacts with human Histone H3.
Characteristics:	Synonyms: rabbit anti-Histone H3 Sym-dimethyl Arg2 dimethyl Lys4 antibody, H3.3B, H3 histone, family 3A, H3.3AH3F3H3F3B, histone H3.3, MGC87783, MGC87782, H3

Product Details

	R2me2s/K4me2
Purification:	Anti-Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] was affinity purified from monospecific antiserum by immunoaffinity chromatography.
Sterility:	Sterile filtered

Target Details

Target:	Histone 3 (H3)
Alternative Name:	Histone H3 (H3 Products)
Background:	Background: Chromatin is the arrangement of DNA and proteins in which chromosomes are formed. Correspondingly, chromatin is formed from nucleosomes, which are comprised of a set of four histone proteins (H2A, H2B, H3, H4) wrapped with DNA. Chromatin is a very dynamic structure in which numerous post-translational modifications work together to activate or repress the availability of DNA to be copied, transcribed, or repaired. These marks decide which DNA will be open and commonly active (euchromatin) or tightly wound to prevent access and activation (heterochromatin). Common histone modifications include methylation of lysine and arginine, acetylation of lysine, phosphorylation of threonine and serine, and sumoylation, biotinylation, and ubiquitylation of lysine. The dimethylation of both arginine 2 (H3 Arg2Me2) and lysine 4 (H3 K4Me2) of H3 are both known marks to have opposing affects. Arg2Me2 maintains transcriptional silence by silencing Set1 mediated K4 methylation, in which K4 methylation is normally associated with active chromatin. The protein arginine methyltransferase PRMT6 can methylate H3R2 in vivo, and overexpression of this enzyme downregulates Hox and Myc dependent genes, both of which are targets of H3 K4 methylation. Anti-Histone H3 are ideal for researchers interested in Chromatin Modifiers, Chromatin Research, Histones and Modified Histones, and Epigenetics research.
Gene ID:	126961
NCBI Accession:	NP_001005464
UniProt:	Q71DI3

Application Details

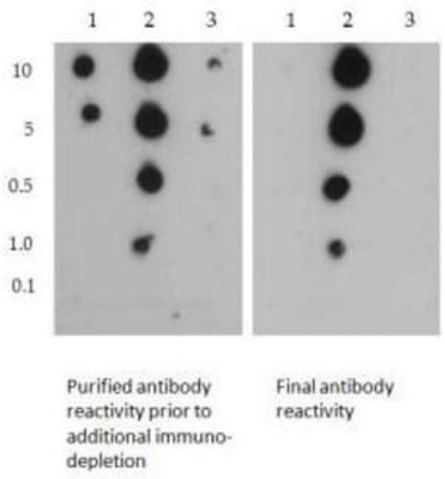
Application Notes:	Immunohistochemistry Dilution: 1:100 Application Note: Anti-Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] antibody is tested for Western Blot, Chromatin Immunoprecipitation, Dot Blot, and Immunofluorescence. Specific

Application Details

	conditions for reactivity should be optimized by the end user. Expect a band approximately ~15.4 kDa corresponding to Histone H3 protein by Western Blotting in HeLa histone prep lysate or the appropriate cell lysate or extract. Epi-Plus™ antibody production in collaboration with Novus Biologicals. ChIP Dilution: 2-5 µg/million cells Western Blot Dilution: 1:500 IF Microscopy Dilution: 1:100 Other: Dot Blot 1:1000
Restrictions:	For Research Use only

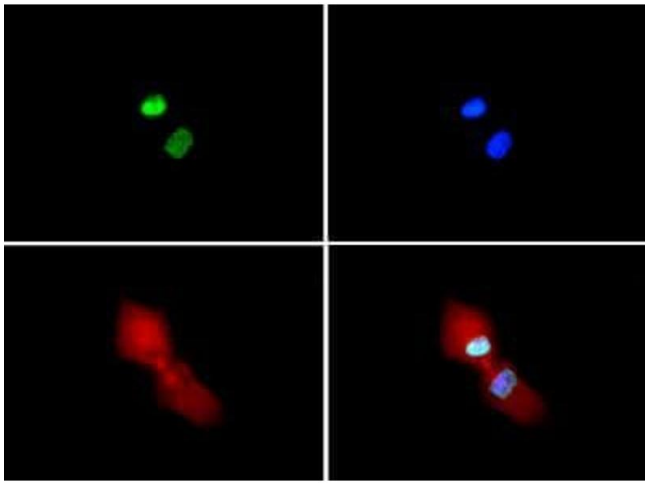
Handling

Format:	Liquid
Concentration:	0.91 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: 30 % Glycerol Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	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.
Expiry Date:	12 months



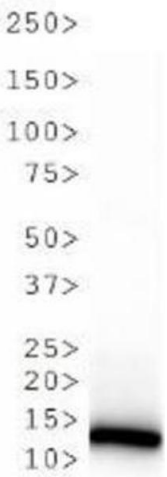
Dot Blot

Image 1. Dot Blot of Rabbit Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] Antibody. Lane 1: R2Me2. Lane 2: R2Me2/K4Me2. Lane 3: K4Me2. Load: 0.1, 1, 0.5, 5, and 10 picomoles of peptide. Primary antibody: Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] antibody at 1:1000 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. Final Antibody reactivity to R2Me2/K4Me2 seen in the right blot.



Fluorescence Microscopy

Image 2. Immunofluorescence of Rabbit Anti-Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] Antibody. Tissue: HeLa cells. Fixation: 0.5 % PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] antibody at a 1:100 dilution for 1 h at RT. Secondary antibody: Dylight 488 secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] is nuclear and chromosomal. Staining: Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] is expressed in green, nuclei and alpha-tubulin are counterstained with DAPI (blue) and Dylight 594 (red).



Western Blotting

Image 3. Western Blot of Rabbit Anti-Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] Antibody. Lane 1: C. elegans embryo cell lysate. Load: 30 µg per lane. Primary antibody: Histone H3 [Sym-dimethyl Arg2, Dimethyl Lys4] at 1:500 for overnight at 4 °C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5 % BLOTTO overnight at 4 °C. Predicted/Observed size: ~15 kDa. Other band(s): None.

Please check the product details page for more images. Overall 5 images are available for ABIN5706792.