Datasheet for 600-401-I58

Histone H3 K4me2 Antibody

Overview

Description:	Anti-Histone H3 [Dimethyl Lys4] (RABBIT) Antibody - 600-401-I58
Item No.:	600-401-I58
Size:	50 µg
Applications:	ChIP, Dot Blot, IF, WB
Reactivity:	Human, C. elegans
Host Species:	Rabbit

Product Details

Background:	H3K4me2 is a modification thought to have a role in transcriptional memory. In CD4+ T lymphocytes, H3K4Me2 is present within gene bodies regulating cellular function, but not in those of housekeeping genes, which indicates that the modification has a role in refining the tissue-specificity of expressed genes. This type of cellular identity targeting is also noted in work with human and mouse spermatozoa; the H3K4Me2 modification marks genes that are relevant in spermatogenesis. Most effects of H3K4Me2 seem to be attributed to its transcriptional activation; however, recent work also indicates that it may also play an RNA-dependent regressive role, related to the GAL-1 promoter. Anti-Histone H3 are ideal for researchers interested in Chromatin Modifiers, Chromatin Research, Histones and Modified Histones, and Epigenetics Research.
Synonyms:	rabbit anti-Histone H3 dimethyl Lys4 antibody, H3.3B, H3.3AH3F3H3F3B, H3 histone, family 3A, histone H3.3, MGC87783, MGC87782, H3K4me2
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST2H3C
Reactivity:	Human, C. elegans
PTM Specificity:	Methylation

Immunogen Type:	Conjugated Peptide
Immunogen:	Histone H3 [Dimethyl Lys4] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic dimethylated peptide surrounding Lysine 4 of human Histone H3.2.
Purity/Specificity:	Anti-Histone H3 [Dimethyl Lys4] was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody reacts with human Histone H3.2. A BLAST analysis was used to suggest cross-reactivity with Human, mouse, and C. elegans. Predicted to react with many species including rat, chicken, Xenopus, Drosophila, and plant based on 100% sequence homology. Cross-reactivity with Histone H3 from other sources has not been determined.
Relevant Links:	• UniProtKB - Q71DI3 • NCBI - NP_001005464 • GeneID - 126961

Application Details

Tested Applications:	ChIP, Dot Blot, IF, WB
Application Note:	Anti-Histone H3 [Dimethyl Lys4] antibody is tested in Western Blot, Immunofluorescence, Chromatin Immunoprecipitation, and Dot Blot. This antibody is useful in Immunocytochemistry. Specific 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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ChIP:	2-5µg/million cells
IF:	1:50
IHC:	1:50
WB:	1:500

Formulation

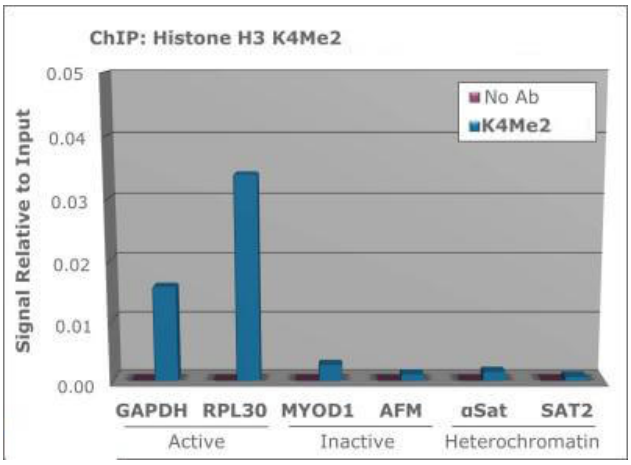
Physical State:	Liquid (sterile filtered)
Concentration:	1.1 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide

Stabilizer:	30% Glycerol

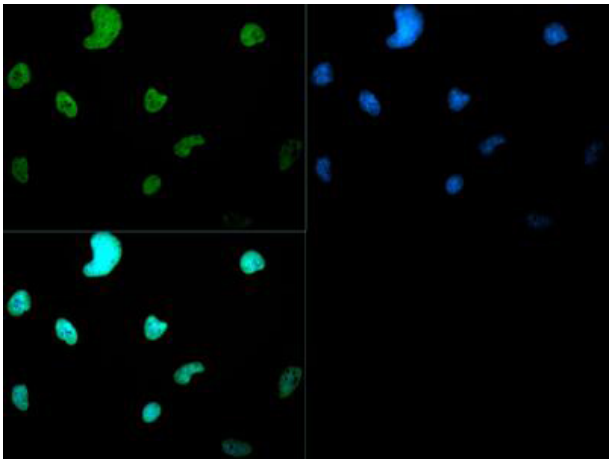
Shipping & Handling

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.

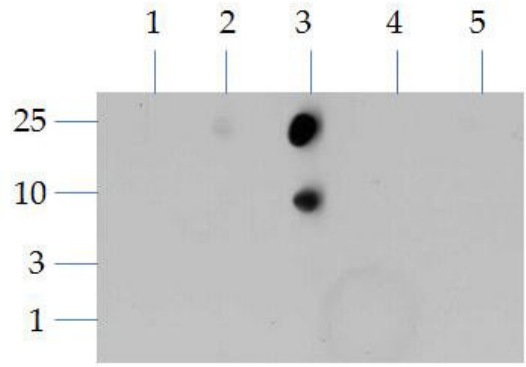
Images



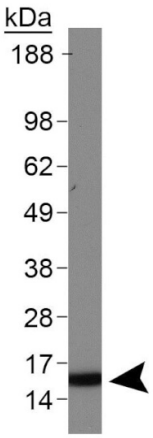
ChIP
Chromatin Immunoprecipitation of Rabbit Anti-Histone H3 [Dimethyl Lys4] Antibody. Chromatin from one million formaldehyde cross-linked Hela cells was used with 2ug of Anti-Histone H3 K4 Me3 and 20ul of magnetic IgG beads per immunoprecipitation. A no antibody (No Ab) control was also used. Immunoprecipitated DNA was quantified using quantitative real-time PCR and SYBR green dye, then normalized to the non-precipitated input chromatin, which is equal to one.



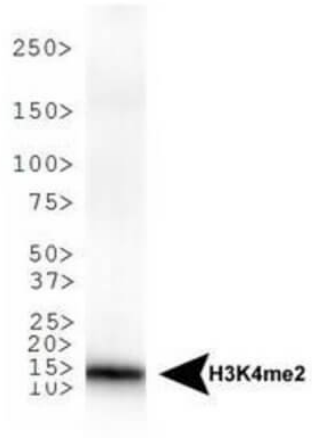
Immunofluorescence Microscopy
Immunofluorescence of Rabbit Anti-Histone H3 [Dimethyl Lys4] Antibody. Tissue: C. elegans embryo lysate. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [Dimethyl Lys4] antibody at a 1:50 dilution for 1 h at RT. Secondary antibody: Dylight 488 secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone H3 [Dimethyl Lys4] is nuclear and chromosomal. Staining: Histone H3 [Dimethyl Lys4] is expressed in green and the nuclei are counterstained blue with DAPI.



Dot Blot
Dot Blot of Rabbit Histone H3 [Dimethyl Lys4] Antibody. Lane 1: K4. Lane 2: K4 Kme1. Lane 3: K4 Kme2. Lane 4: K4 Kme3. Lane 5: K4 KAc. Load: 1, 3, 10, and 25 picomoles of peptide. Primary antibody: Histone H3 [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.



Western Blot
Western Blot of Rabbit Anti-Histone H3 [Dimethyl Lys4] Antibody. Lane 1: HeLa histone preps. Load: 30 µg per lane. Primary antibody: Histone H3 [Dimethyl Lys4] at 1:1000 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.



Western Blot
Western Blot of Rabbit Anti-Histone H3 [Dimethyl Lys4] Antibody. Lane 1: C. elegans embryo lysate. Load: 30 µg per lane. Primary antibody: Histone H3 [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.

Disclaimer

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