

## Datasheet for 600-401-I70

## Histone H3 K9me2 Antibody

### Overview

<b>Description:</b>	Anti-Histone H3 [Dimethyl Lys9] (RABBIT) Antibody - 600-401-I70
<b>Item No.:</b>	600-401-I70
<b>Size:</b>	50 µg
<b>Applications:</b>	ChIP, Dot Blot, IF, WB
<b>Reactivity:</b>	Human, C. elegans
<b>Host Species:</b>	Rabbit

### Product Details

<b>Background:</b>	Dimethylated histone H3 at lysine 9 is associated with several inflammatory diseases. Usually, the histone modification is implicated through a one-off association with critical disease related genes. For example, in Alzheimer's disease, amyloid beta-peptide accumulation is caused by insufficient neprilysin, which is in turn caused by increased concentrations of H3K9me2 in the neprilysin promoter following exposure to hypoxia. In osteoarthritis, increased H3K9me2 at the NFAT1 promoter represses the expression of NFAT, resulting in overexpression of proinflammatory cytokines. PHF2 and ARID5B are important in regulating the methylation of H3 at K9, and thus chromatin reorganization and gene transcription. Anti-Histone H3 are ideal for researchers interested in Chromatin Modifiers, Chromatin Research, Histones and Modified Histones, and Epigenetics research.
<b>Synonyms:</b>	rabbit anti-Histone H3 dimethyl Lys9 antibody, H3.3B, H3 histone, family 3A, H3.3AH3F3H3F3B, histone H3.3, MGC87783, MGC87782, H3K9me2
<b>Host Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>Format:</b>	IgG

### Target Details

<b>Gene Name:</b>	HIST2H3C
<b>Reactivity:</b>	Human, C. elegans
<b>PTM Specificity:</b>	Methylation

<b>Immunogen Type:</b>	Conjugated Peptide
<b>Immunogen:</b>	Histone H3 [Dimethyl Lys9] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic dimethylated peptide surrounding Lysine 9 of human Histone H3.2.
<b>Purity/Specificity:</b>	Anti-Histone H3 [Dimethyl Lys9] 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.
<b>Relevant Links:</b>	<ul style="list-style-type: none"><li>• <a href="#">UniProtKB - Q71DI3</a></li><li>• <a href="#">NCBI - NP_001005464</a></li><li>• <a href="#">GeneID - 126961</a></li></ul>

## Application Details

<b>Tested Applications:</b>	ChIP, Dot Blot, IF, WB
<b>Application Note:</b>	Anti-Histone H3 [Dimethyl Lys9] antibody is tested for Western Blot, Chromatin Immunoprecipitation, Dot Blot, and Immunofluorescence. 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.
<b>Assay Dilutions:</b>	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
<b>ChIP:</b>	2-5µg/million cells
<b>IF:</b>	1:50
<b>IHC:</b>	1:50
<b>WB:</b>	1:500

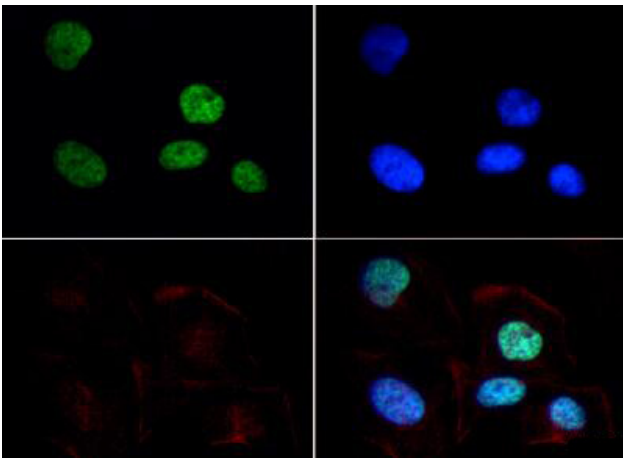
## Formulation

<b>Physical State:</b>	Liquid (sterile filtered)
<b>Concentration:</b>	1.0mg/mL by UV absorbance at 280 nm
<b>Buffer:</b>	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
<b>Preservative:</b>	0.01% (w/v) Sodium Azide
<b>Stabilizer:</b>	30% Glycerol

## Shipping & Handling

<b>Shipping Condition:</b>	Dry Ice
<b>Storage Condition:</b>	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.
<b>Expiration:</b>	Expiration date is one (1) year from date of receipt.

## Images

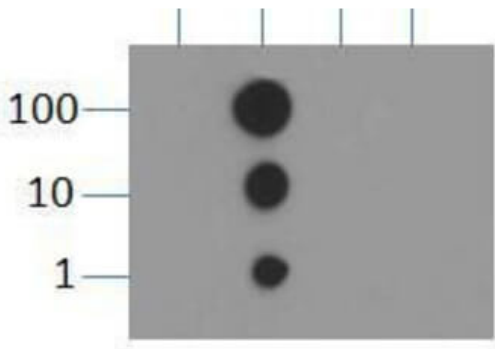


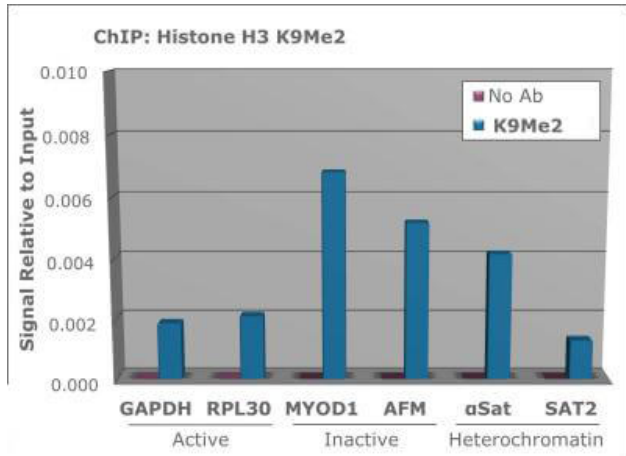
### Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-Histone H3 [Dimethyl Lys9] Antibody. Tissue: HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [Dimethyl Lys9] antibody at a 1:50 dilution for 1 h at RT. Secondary antibody: FITC secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone H3 [Dimethyl Lys9] is nuclear and chromosomal. Staining: Histone H3 [Dimethyl Lys9] is expressed in green and the nuclei are counterstained with DAPI (blue).

### Dot Blot

Dot Blot of Rabbit Histone H3 [Dimethyl Lys9] Antibody. Lane 1: K9 Me1. Lane 2: K9 Me2. Lane 3: K9 Me3. Lane 4: K9. Load: 1, 10, and 100 picomoles of peptide. Primary antibody: Histone H3 [Dimethyl Lys9] 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.



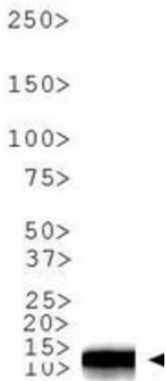


### ChIP

Chromatin Immunoprecipitation of Histone H3 [Dimethyl Lys9] Antibody. Chromatin from one million formaldehyde cross-linked HeLa cells was used with 2ug of Anti-Histone H3 K9me2 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.

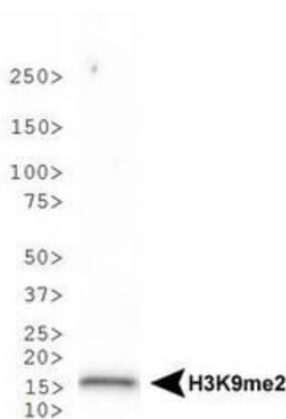
### Western Blot

Western Blot of Rabbit Anti-Histone H3 [Dimethyl Lys9] Antibody. Lane 1: C. elegans embryo lysate. Load: 30 µg per lane. Primary antibody: Histone H3 [Dimethyl Lys9] 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.



### Western Blot

Western Blot of Rabbit Anti-Histone H3 [Dimethyl Lys9] Antibody. Lane 1: HeLa histone preps. Load: 30 µg per lane. Primary antibody: Histone H3 [Dimethyl Lys9] 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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