

**Datasheet for 600-401-I69****Histone H3 K9me1 Antibody****Overview**

|                      |                                                                   |
|----------------------|-------------------------------------------------------------------|
| <b>Description:</b>  | Anti-Histone H3 [Monomethyl Lys9] (RABBIT) Antibody - 600-401-I69 |
| <b>Item No.:</b>     | 600-401-I69                                                       |
| <b>Size:</b>         | 50 µg                                                             |
| <b>Applications:</b> | ChIP, Dot Blot, IF, Multiplex, WB                                 |
| <b>Reactivity:</b>   | Human, Mouse, C. elegans                                          |
| <b>Host Species:</b> | Rabbit                                                            |

**Product Details**

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Background:</b>   | Histone H3 K9 methylation is a conserved epigenetic silencer of transcription. However, for this modification to make its effect, the G9a/GLP heteromeric complex is required to methylate histone H3. Throughout development of normal tissues, DNA methylation and stable gene silencing is required to optimize cellular development. Likewise, in cancer, dysfunctions in these normal functions are required to enhance cellular proliferation. When K3K9 me1 silences the expression of RIZ1, normal apoptosis of pre-cancerous cells does not occur, and proliferation goes ahead unabated. From H3K9me1, conversion to H3K9me3 is mediated by SUV4, at transposons and pseudogenes. 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 monomethyl Lys9 antibody, H3.3B, H3 histone, family 3A, H3.3AH3F3H3F3B, histone H3.3, MGC87783, MGC87782, H3K9me1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Host Species:</b> | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Clonality:</b>    | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Format:</b>       | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

**Target Details**

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

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Immunogen Type:</b>     | Conjugated Peptide                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Immunogen:</b>          | Histone H3 [Monomethyl Lys9] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic monomethylated peptide surrounding Lysine 9 of human Histone H3.2.                                                                                                                                                                                                                                                    |
| <b>Purity/Specificity:</b> | Anti-Histone H3 [Monomethyl 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="#">GenelD - 126961</a></li></ul>                                                                                                                                                                                                                                                                                           |

## Application Details

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tested Applications:</b> | ChIP, Dot Blot, IF, Multiplex, WB                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Application Note:</b>    | Anti-Histone H3 [Monomethyl Lys9] antibody is tested for Western Blot, Chromatin Immunoprecipitation, Dot Blot, and Immunocytochemistry/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>                  | 1:500                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>IHC:</b>                 | 1:500                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>WB:</b>                  | 1:500                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

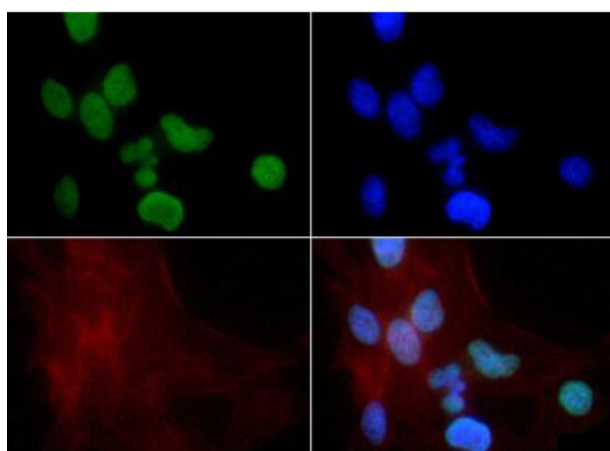
## Formulation

|                        |                                                            |
|------------------------|------------------------------------------------------------|
| <b>Physical State:</b> | Liquid (sterile filtered)                                  |
| <b>Concentration:</b>  | 0.7 mg/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                                   |

## Shipping & Handling

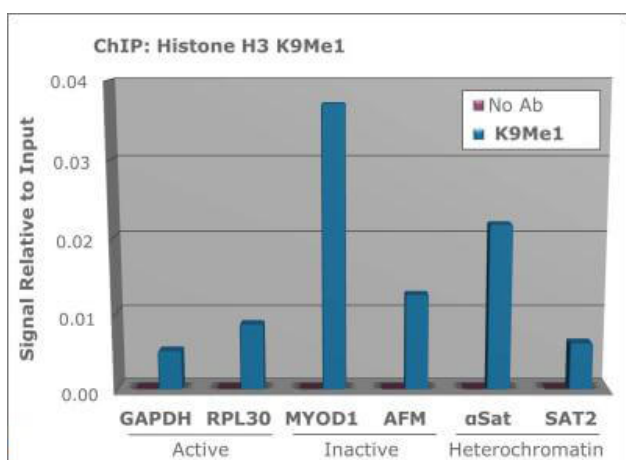
|                            |                                                                                                                                                                                                                                                                                                                                               |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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



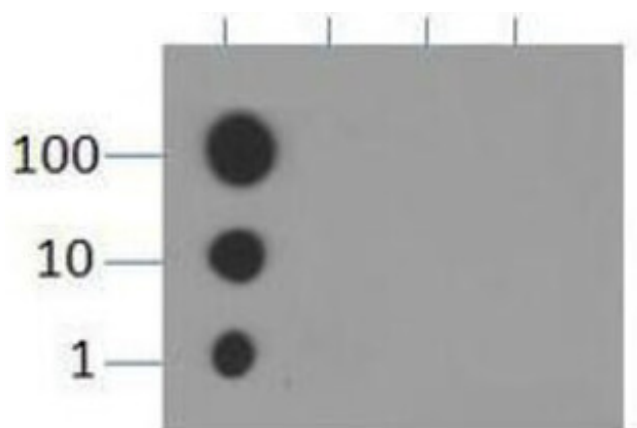
### Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-Histone H3 [Monomethyl Lys9] Antibody. Tissue: HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [Monomethyl 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 [Monomethyl Lys9] is nuclear and chromosomal. Staining: Histone H3 [Monomethyl Lys9] is expressed in green and the nuclei and actin are counterstained with DAPI (blue) and Phalloidin (red).



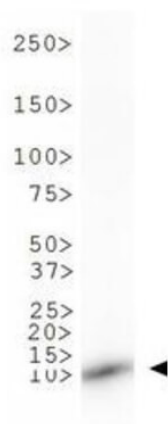
### ChIP

Chromatin Immunoprecipitation of Histone H3 [Monomethyl Lys9] Antibody. Chromatin from one million formaldehyde cross-linked HeLa cells was used with 2ug of Anti-Histone H3 K9Me1 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.



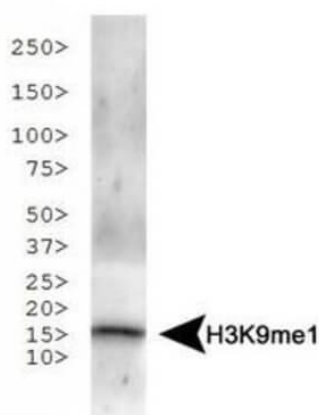
#### Dot Blot

Dot Blot of Rabbit Histone H3 [Monomethyl Lys9] Antibody. Lane 1: K9 KMe1. Lane 2: K9 KMe2. Lane 3: K9 KMe3. Lane 4: K9. Load: 1, 10, and 100 picomoles of peptide. Primary antibody: Histone H3 [Monomethyl 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.



#### Western Blot

Western Blot of Rabbit Anti-Histone H3 [Monomethyl Lys9] Antibody. Lane 1: C. elegans embryo lysate. Load: 30 µg per lane. Primary antibody: Histone H3 [Monomethyl 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 [Monomethyl Lys9] Antibody. Lane 1: NIH-3T3 histone preps. Load: 30 µg per lane. Primary antibody: Histone H3 [Monomethyl 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

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.