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Datasheet for 600-401-P10

# Histone H3 K79me1 Antibody

## Overview

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| **Description:** | Anti-Histone H3 [Monomethyl Lys79] (RABBIT) Antibody - 600-401-P10 |
| **Item No.:** | 600-401-P10 |
| **Size:** | 50 µg |
| **Applications:** | ChIP, Dot Blot, IF, Multiplex, WB |
| **Reactivity:** | Human, Mouse, Monkey |
| **Host Species:** | Rabbit |

## Product Details

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| **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. In particular Lys79 methylations are involved in transcriptional activation, and has been found to be inversely correlated with H2B ubiquitination. Anti-Histone H3 K79-Me1 antibody is ideal for researchers interested in Chromatin Modifiers, Chromatin Research, Histones and Modified Histones, and Epigenetics research. |
| **Synonyms:** | rabbit anti-Histone H3 monomethyl Lys79 antibody, H3K79me1, Anti-H3 K79-Me1, Histone H3 antibodies |
| **Host Species:** | Rabbit |
| **Clonality:** | Polyclonal |
| **Format:** | IgG |

## Target Details

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| **Gene Name:** | HIST1H3A |
| **Reactivity:** | Human, Mouse, Monkey |

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| **PTM Specificity:** | Methylation |
| **Immunogen Type:** | Conjugated Peptide |
| **Immunogen:** | Histone H3 K79-Me1 affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide surrounding the Lys79 site of human Histone H3. |
| **Purity/Specificity:** | Anti-Histone H3 [Monomethyl Lys79] was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody reacts with human Histone H3. 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 - P84243<br>• NCBI - NP_002098.1<br>• GeneID - 3020 |

## Application Details

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| **Tested Applications:** | ChIP, Dot Blot, IF, Multiplex, WB |
| **Application Note:** | Anti-Histone H3 K79-Me1 antibody is tested in Western Blot, ChIP, Immunofluorescence, and Dot Blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~15kDa 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. |
| **ChIP:** | 2 µg |
| **IF:** | 1:50 - 1:100 |
| **WB:** | 0.5µg/mL |
| **Other:** | Dot Blot - 1:1000 |

## Formulation

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| **Physical State:** | Liquid (sterile filtered) |
| **Concentration:** | 0.50 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 |

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| **Stabilizer:** | 30% Glycerol |

## Shipping & Handling

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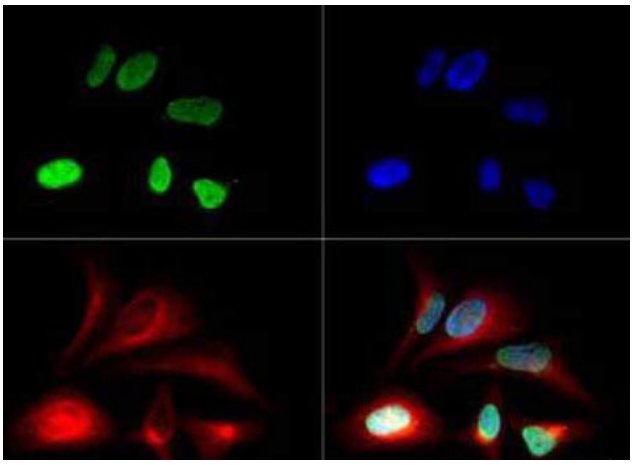
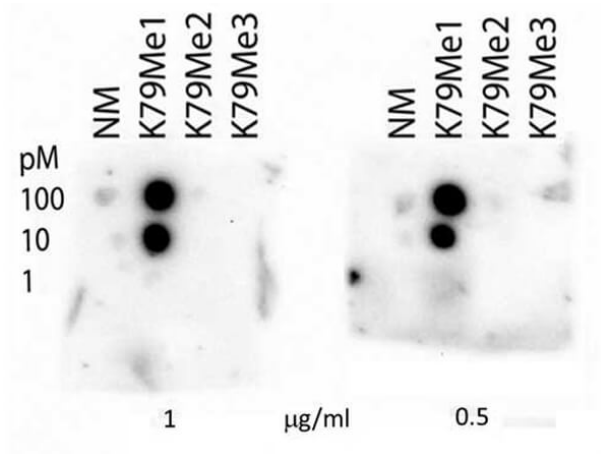
| **Shipping Condition:** | Dry Ice |
| **Storage Condition:** | Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product 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. |

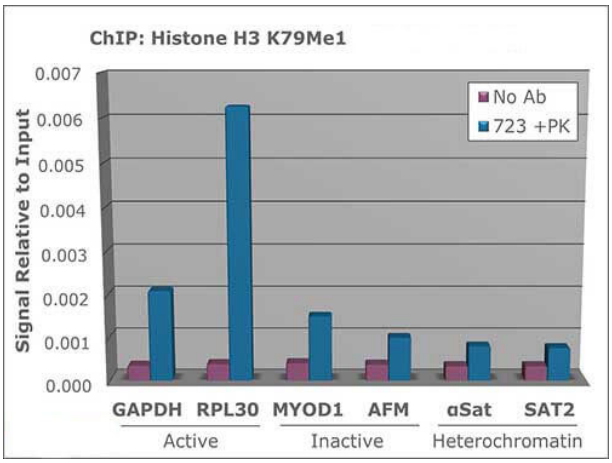
## Images



**Immunofluorescence Microscopy**
Immunofluorescence of Histone H3 [monomethyl Lys79-Me1]: Histone H3 K79me1 antibody was tested in Hela cells with DyLight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and DyLight 550 (red).

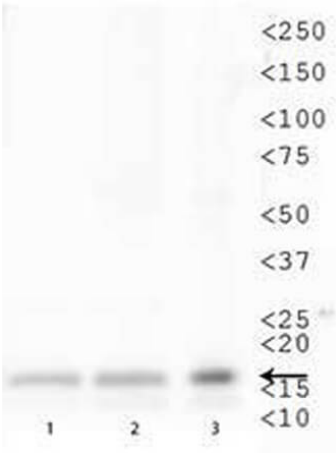



**Dot Blot**
Dot Blot of Rabbit Histone H3 [monomethyl Lys79] Antibody. Lane 1: K79 unmodified. Lane 2: K79-Me1. Lane 3: K79-Me2. Lane 4: K79-Me3. Load: 1, 10, and 100 picomoles of peptide. Primary antibody: Histone H3 K79-Me1 antibody at 1:1000 for 45 min at 4°C. Secondary antibody: RABBIT IgG (H&L) Secondary Antibody Peroxidase Conjugated Pre-adsorbed at 1:40,000 for 30 min at RT. Block: 5% BLOTTO 30 minutes at RT.




**ChIP**

Chromatin Immunoprecipitation of Histone H3 [monomethyl Lys79] Antibody: Chromatin from one million formaldehyde cross-linked Hela cells was used with 2ug of H3 K79Me1 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 Histone H3 [monomethyl Lys79] (RABBIT) Antibody. Western Blot analysis against untreated cell extracts. Lane 1: HeLa cell lysates. Lane 2: NIH/3T3 cell lysates. Lane 3: Cos 7 cell lysates. Load: 35 µg per lane. Primary antibody: Histone H3 K79-Me1 antibody at 0.5µg/mL 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 for Histone H3 K79-Me1.

## Disclaimer