

Datasheet for 600-401-I94**Histone H3 K56me3 Antibody****Overview**

Description:	Anti-Histone H3 [Trimethyl Lys56] (RABBIT) Antibody - 600-401-I94
Item No.:	600-401-I94
Size:	50 µg
Applications:	Dot Blot, IF, Multiplex, WB
Reactivity:	Human, C. elegans
Host Species:	Rabbit

Product Details

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. Trimethylation of lysine 56 on H3 is a novel modification, but has been reported in mouse cells at very low frequencies. Anti-Histone H3 are ideal for researchers interested in Chromatin Research, Epigenetics, Chromatin Modifiers, Histones and Modified Histones.
Synonyms:	rabbit anti-Histone H3 trimethyl Lys56 antibody, H3.3B, H3.3AH3F3H3F3B, H3 histone, family 3A, histone H3.3, MGC87782, MGC87783, H3K56me3
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 [Trimethyl Lys56] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic trimethylated peptide surrounding Lysine 56 of human Histone H3.
Purity/Specificity:	Anti-Histone H3 [Trimethyl Lys56] 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 - Q71DI3 • NCBI - NP_001005464 • GeneID - 126961

Application Details

Tested Applications:	Dot Blot, IF, Multiplex, WB
Application Note:	Anti-Histone H3 [Trimethyl Lys56] antibody is tested in Western Blot, Dot Blot, and Immunofluorescence. This antibody is useful in Chromatin Immunoprecipitation and 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:	1:40
IHC:	1:40
WB:	1:1000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.84 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

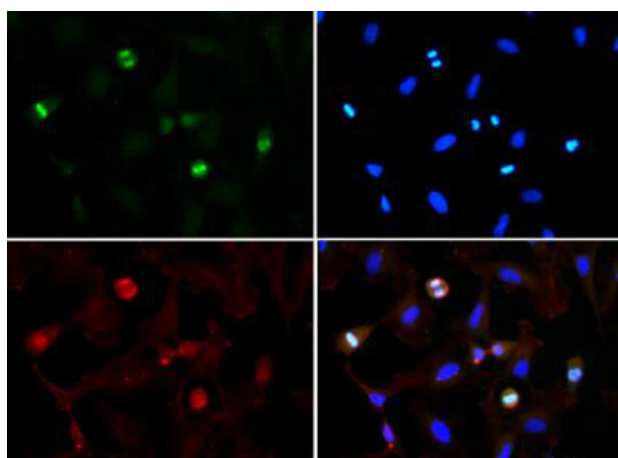
Shipping & Handling

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.

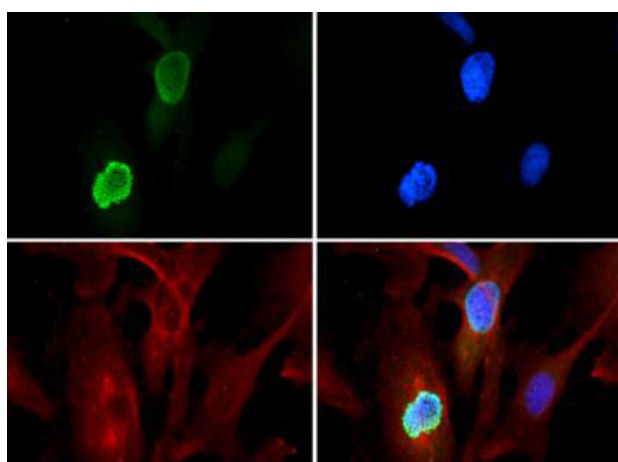
Expiration: Expiration date is one (1) year from date of receipt.

Images



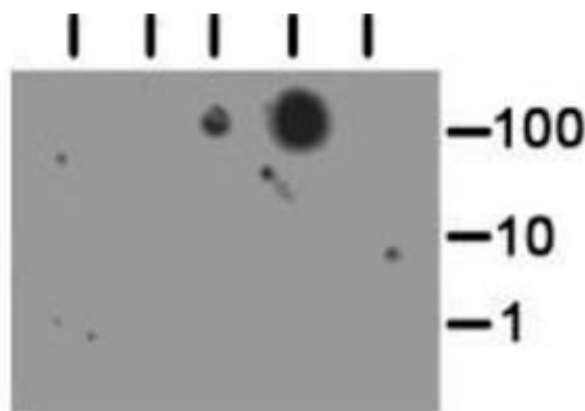
Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-Histone H3 [Trimethyl Lys56] Antibody. Tissue: HeLa cells during telophase. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [Trimethyl Lys56] 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 [Trimethyl Lys56] is nuclear and chromosomal. Staining: Histone H3 [Trimethyl Lys56] is expressed in green, nuclei and alpha-tubulin are counterstained with DAPI (blue) and Dylight 550 (red).



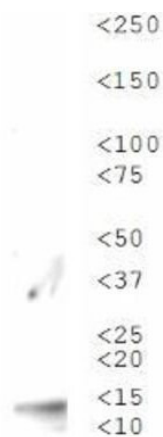
Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-Histone H3 [Trimethyl Lys56] Antibody. Tissue: HeLa cells during prophase. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [Trimethyl Lys56] 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 [Trimethyl Lys56] is nuclear and chromosomal. Staining: Histone H3 [Trimethyl Lys56] is expressed in green, nuclei and alpha-tubulin are counterstained with DAPI (blue) and Dylight 550 (red).



Dot Blot

Dot Blot of Rabbit Histone H3 [Trimethyl Lys56] Antibody.
 Lane 1: Ac. Lane 2: me1. Lane 3: me2. Lane 4: me3. Lane 5:
 unmodified. Load: 1, 10, and 100 picomoles of peptide.
 Primary antibody: Histone H3 [Trimethyl Lys56] antibody at
 1:40 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 [Trimethyl Lys56]
 Antibody. Lane 1: C. elegans embryo lysate. Load: 30 µg per
 lane. Primary antibody: Histone H3 [Trimethyl Lys56] at 1
 µg/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. 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.