

Datasheet for 600-401-I77

Histone H3 R17me2a Antibody

Overview

Description:	Anti-Histone H3 [Asym-dimethyl Arg17] (RABBIT) Antibody - 600-401-I77
Item No.:	600-401-I77
Size:	50 µg
Applications:	ChIP, IF, WB
Reactivity:	Human, Mouse, 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. In particular, dimetylation of H3 Arg17 (H3 R17Me2) has been linked to gene activation. Coactivator-associated arginine methyltransferase-1 (CARM1) methylates Arg17 with its protein arginine methyltransferase (PRMT) catalytic core. Activation of this modification is linked to transcription hormone response promoters, as well as cell fate regulation. Interestingly, H3 methylation of R17 and R26 contributes to greater pluripotency potential of stem cells, while downregulation of this PTM increases differentiation. 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 Asym-dimethyl Arg17 antibody, H3.3B, H3 histone, family 3A, H3.3AH3F3H3F3B, histone H3.3, MGC87783, MGC87782, H3R17me2a
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST2H3C
Reactivity:	Human, Mouse, C. elegans
PTM Specificity:	Methylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Histone H3 [Asym-dimethyl Arg17] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic asymmetric dimethylated peptide surrounding Arginine 17 of human Histone H3.2.
Purity/Specificity:	Anti-Histone H3 [Asym-dimethyl Arg17] 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:	<ul style="list-style-type: none">• UniProtKB - Q71DI3• NCBI - NP_001005464• GenelD - 126961

Application Details

Tested Applications:	ChIP, IF, WB
Application Note:	Anti-Histone H3 [Asym-dimethyl Arg17] antibody is tested for Western Blot, Chromatin Immunoprecipitation, 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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ChIP:	2-5µg/million cells
IF:	1:100
IHC:	1:100
WB:	1:500

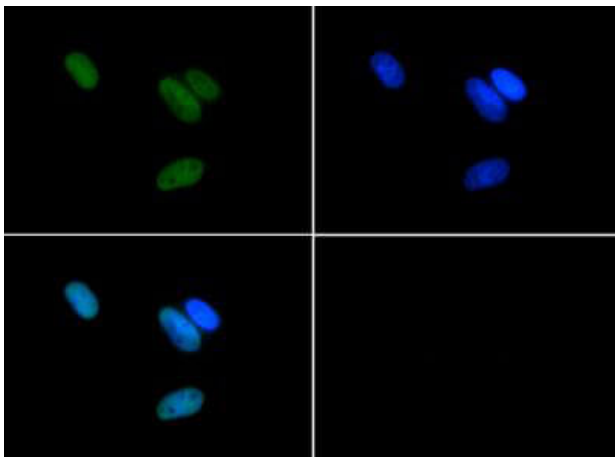
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.83 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

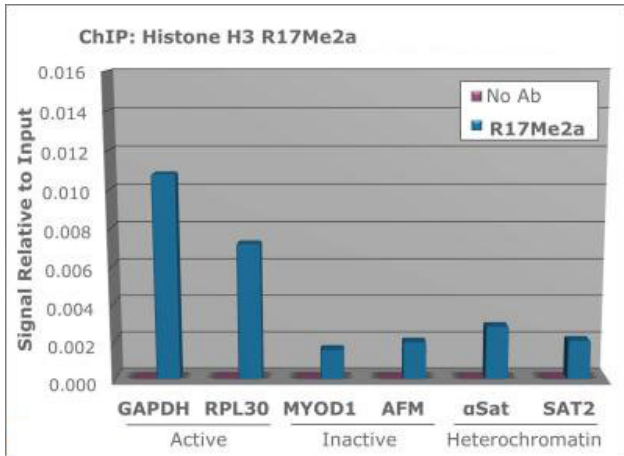
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several 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 [Asym-dimethyl Arg17] Antibody. Tissue: HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [Asym-dimethyl Arg17] 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 [Asym-dimethyl Arg17] is nuclear and chromosomal. Staining: Histone H3 [Asym-dimethyl Arg17] is expressed in green, nuclei are counterstained with Dapi (blue).

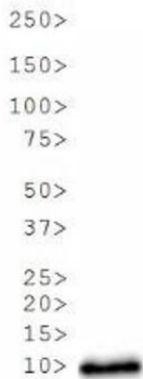


ChIP

Chromatin Immunoprecipitation of Rabbit Anti Histone H3 [Asym-dimethyl Arg17] Antibody. Chromatin from one million formaldehyde cross-linked HeLa cells was used with 2 ug of Anti-Histone H3R17me2a was used to IP DNA from fixed HeLa cells alongside a no antibody (No Ab) control. DNA was measured by qRT-PCR and normalized to total input (input=1).

Western Blot

Western Blot of Rabbit Anti-Histone H3 [Asym-dimethyl Arg17] Antibody. Lane 1: C. elegans embryo lysate. Load: 30 µg per lane. Primary antibody: Histone H3 [Asym-dimethyl Arg17] 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 [Asym-dimethyl Arg17] Antibody. Lane 1: NIH-3T3 histone prep cell lysate. Load: 30 µg per lane. Primary antibody: Histone H3 [Asym-dimethyl Arg17] 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.