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Datasheet for 600-401-I53

Histone H3 R2me2a Antibody

Overview

Description:	Anti-Histone H3 [Asym-dimethyl Arg2] (RABBIT) Antibody - 600-401-I53
Item No.:	600-401-I53
Size:	50 µg
Applications:	Dot Blot, IF, WB
Reactivity:	Human, C. elegans
Host Species:	Rabbit

Product Details

Background:	When Set1 attempts to methylate H3K4, epigenetic silencing of downstream genes is mediated by dimethylation of histone H3 at Arg2. This modification is typically found in heterochromatin and inactive genes, and is not found when trimethylation of Arg2 is observed. Conversion from mono-, di- and tri-methyl forms of H3R2 is mediated through the activity of the arginine methyltransferase PRMT6. H3K4 cannot be methylated when the asymmetric H3R2me2 mark is present. In active promoters, this modification is actively eliminated. H3R2me2a prevents WDR5 recognition, MLL methyltransferase recruitment, and H3K4 methylation. 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 Arg2 antibody, H3.3B, H3 histone, family 3A, H3.3AH3F3H3F3B, histone H3.3, MGC87783, MGC87782, H3R2me2a
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 [Asym-dimethyl Arg2] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic dimethylated peptide surrounding Arginine 2 of human Histone H3.2.
Purity/Specificity:	Anti-Histone H3 [Asym-dimethyl Arg2] 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:	• UniProtKB - Q71DI3 • NCBI - NP_001005464 • GeneID - 126961

Application Details

Tested Applications:	Dot Blot, IF, WB
Application Note:	Anti-Histone H3 [Asym-dimethyl Arg2] antibody is tested by Western Blot, 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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IF:	1:50-1:100
IHC:	1:50-1:100
WB:	1:500

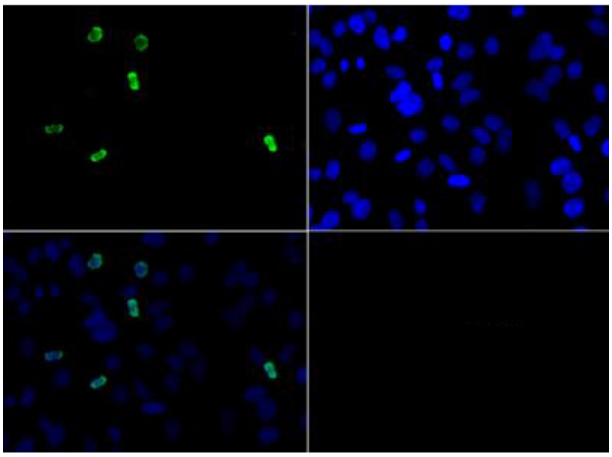
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.71 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

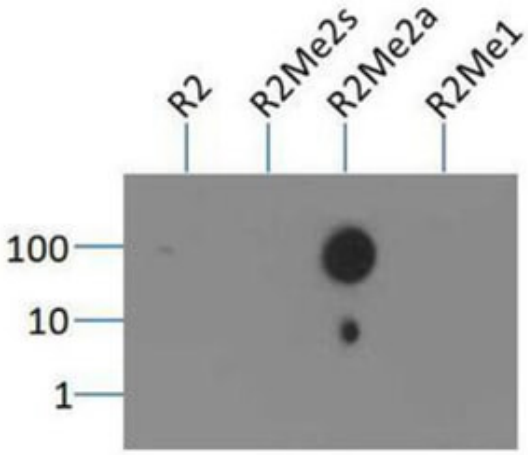
Shipping & Handling

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.

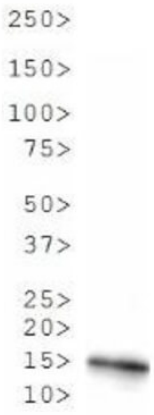
Images



Immunofluorescence Microscopy
Immunofluorescence Microscopy of Rabbit Anti-Histone H3 [Asym-dimethyl Arg2] Antibody. Tissue: HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [Asym-dimethyl Arg2] 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 [Asym-dimethyl Arg2] is nuclear and chromosomal. Staining: Histone H3 [Asym-dimethyl Arg2] is expressed in green while the nuclei were counterstained with DAPI (blue).



Dot Blot
Dot Blot of Rabbit Histone H3 [Asym-dimethyl Arg2] Antibody. Antigen: Methylated forms of the immunizing peptide. Load: 1, 10, and 100 picomoles of sample. Primary antibody: Histone H3 [Asym-dimethyl Arg2] 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 [Asym-dimethyl Arg2] Antibody. Lane 1: C. elegans embryo lysate. Load: 30 µg per lane. Primary antibody: Histone H3 [Monomethyl Arg2] 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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