Order online now!

www.rockland.com
tech@rockland.com
+1 484.791.3823

Datasheet for 600-401-J02

Histone H4 K20me2 Antibody

Overview

Description:	Anti-Histone H4 [Dimethyl Lys20] (RABBIT) Antibody - 600-401-J02
Item No.:	600-401-J02
Size:	50 µg
Applications:	ChIP, Dot Blot, IF, WB
Reactivity:	Human, C. elegans
Host Species:	Rabbit

Product Details

Background:	When K20 is di-methylated on H4, the downstream effect is silencing of genes. This modification is also necessary and sufficient for 53BP1 binding, which is a prerequisite for DNA repair, a highly conserved mechanism. H4K20me2 is associated with hypoacetylation, and inactivation of certain genes. NSD1 and Suv420h1/2 trigger the dimethylation of K20, but only after SET8 catalyzes the mono-methylation of the same lysine, indicating a complex regulation of this modification that can so seriously affect replication and stability of genomic information. Anti-Histone H4 are ideal for researchers interested in Chromatin Modifiers, Chromatin Research, DNA Repair, DNA replication Transcription Translation and Splicing, Histones and Modified Histones, and Epigenetics research.
Synonyms:	rabbit anti-Histone H4 dimethyl Lys20 antibody, H4K20me2, HIST2H4B, HIST1H4H, HIST1H4I, HIST1H4J, HIST1H4K, HIST1H4L, HIST2H4, HIST2H4A, HIST1H4A, HIST1H4B, HIST1H4C, HIST1H4D, HIST1H4E, HIST1H4F, histone cluster 4, H4, histone 4, H4
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST4H4
Reactivity:	Human, C. elegans
PTM Specificity:	Methylation

Immunogen Type:	Conjugated Peptide
Immunogen:	Histone H4 [Dimethyl Lys20] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic dimethylated peptide surrounding Lysine 20 of human Histone H4.
Purity/Specificity:	Anti-Histone H4 [Dimethyl Lys20] was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody reacts with human Histone H4. A BLAST analysis was used to suggest cross-reactivity with Human, mouse, and C. elegans. Predicted to react with most mammal species. Cross-reactivity with Histone H4 from other sources has not been determined.
Relevant Links:	• UniProtKB - P62805 • NCBI - NP_001029249 • GeneID - 121504

Application Details

Tested Applications:	ChIP, Dot Blot, IF, WB
Application Note:	Anti-Histone H4 [Dimethyl Lys20] antibody is tested for Western Blot, Dot Blot, Chromatin Immunoprecipitation, Immunofluorescence, and Immunocytochemistry. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~13 kDa corresponding to Histone H4 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:	1:50
IHC:	1:50
WB:	1:2000

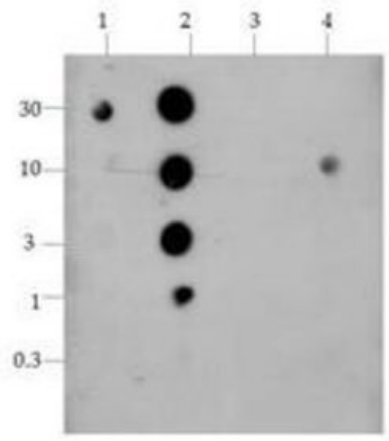
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.53 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

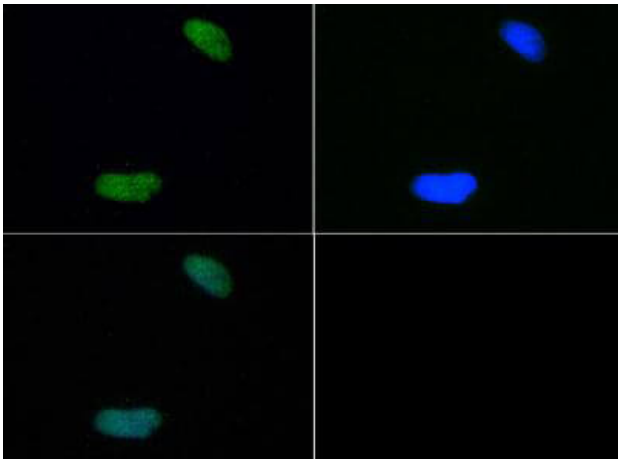
Shipping & Handling

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.

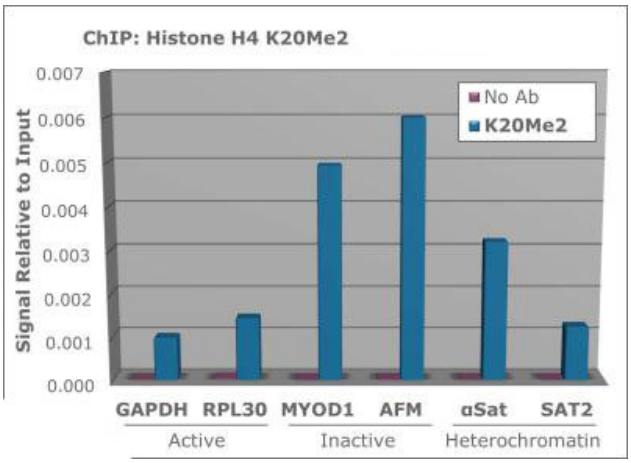
Images



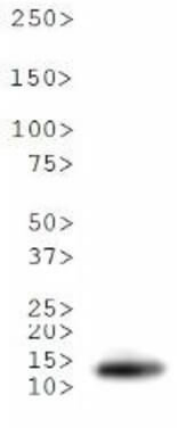
Dot Blot
Dot Blot of Rabbit Histone H4 [Dimethyl Lys20] Antibody. Lane 1: K9-K14. Lane 2: K9-Kac-K14-Kac. Lane 3: K9-K14-Kac. Lane 4: K9-ac-K14. Load: 0.3, 1, 3, 10, and 30 picomoles of peptide. Primary antibody: Histone H4 [Dimethyl Lys20] antibody at 1:2000 for 45 min at 4°C. Secondary antibody: Dylight™488 rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C.



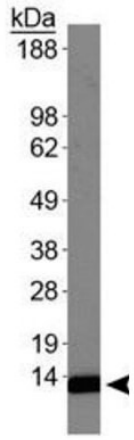
Immunofluorescence Microscopy
Immunofluorescence of Rabbit Anti-Histone H4 [Dimethyl Lys20] Antibody. Tissue: HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H4 [Dimethyl Lys20] antibody at a 1:50 dilution for 1 h at RT. Secondary antibody: FITC secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone H4 [Dimethyl Lys20] is nuclear and chromosomal. Staining: Histone H4 [Dimethyl Lys20] is expressed in green, nuclei are counterstained with DAPI (blue).



ChIP
Chromatin Immunoprecipitation of Rabbit Anti-Histone H4 [Dimethyl Lys20] Antibody. Chromatin from one million formaldehyde cross-linked Hela cells was used with 2ug of Anti-Histone H4 K20me2 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 Rabbit Anti-Histone H4 [Dimethyl Lys20] Antibody. Lane 1: C. elegans embryo lysate. Load: 30 µg per lane. Primary antibody: Histone H4 [Dimethyl Lys20] at 1:2000 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: ~13 kDa. Other band(s): None.



Western Blot
Western Blot of Rabbit Anti-Histone H4 [Dimethyl Lys20] Antibody. Lane 1: HeLa histone preps. Load: 30 µg per lane. Primary antibody: Histone H4 [Dimethyl Lys20] at 1:2000 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: ~13 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.