

Datasheet for 600-401-V34**Histone H3 K27me2 Antibody****Overview**

Description:	Anti-Histone H3 [Dimethyl Lys27] (RABBIT) Antibody - 600-401-V34
Item No.:	600-401-V34
Size:	50 µg
Applications:	ChIP, Dot Blot, ELISA, IF, WB
Reactivity:	Human, Zebrafish
Host Species:	Rabbit

Product Details

Background:	Histones are the main constituents of the protein part of chromosomes of eukaryotic cells. They are rich in the amino acids arginine and lysine and have been greatly conserved during evolution. Histones pack the DNA into tight masses of chromatin. Two core histones of each class H2A, H2B, H3 and H4 assemble and are wrapped by 146 base pairs of DNA to form one octameric nucleosome. Histone tails undergo numerous post-translational modifications, which either directly or indirectly alter chromatin structure to facilitate transcriptional activation or repression or other nuclear processes. In addition to the genetic code, combinations of the different histone modifications reveal the so-called "histone code". Histone methylation and demethylation is dynamically regulated by respectively histone methyl transferases and histone demethylases. Levels of H3K27 dimethylation are higher in silent genes than in active genes suggesting that this histone modification is associated with transcriptional repression. Anti-H3K27me2 Antibody is ideal for research in Chromatin Remodeling, Epigenetics and Gene Expression.
Synonyms:	Histone H3.1, Histone H3/a, Histone H3/b, Histone H3/c, Histone H3/d, Histone H3/e, Histone H3/f, Histone H3/g, Histone H3/h, Histone H3/i, Histone H3/j, Histone H3/k, Histone H3/l
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST1H3A
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Reactivity:	Human, Zebrafish
PTM Specificity:	Methylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-H3K27me2 Antibody was produced in rabbits by repeated immunizations with a synthetic peptide of human histone H3, dimethylated at lysine 27.
Purity/Specificity:	Anti-H3K27me2 Antibody was purified by affinity purification. This product reacts with human Histone 3 dimethyl Lys27. Cross reactivity with H3K27me2 from species other than human is not known.
Relevant Links:	• UniProtKB - P84243 • GeneID - 3020 • NCBI - NP_002098

Application Details

Tested Applications:	ChIP, Dot Blot, ELISA, IF, WB
Application Note:	Anti-H3K27me2 Antibody is tested in Chromatin Immunoprecipitation, Dot Blot, ELISA, Immunofluorescence, and Western Blots. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 17 kDa in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ChIP:	2 µg/ChIP
ELISA:	1:1,000
IF:	1:500
WB:	1:1,000

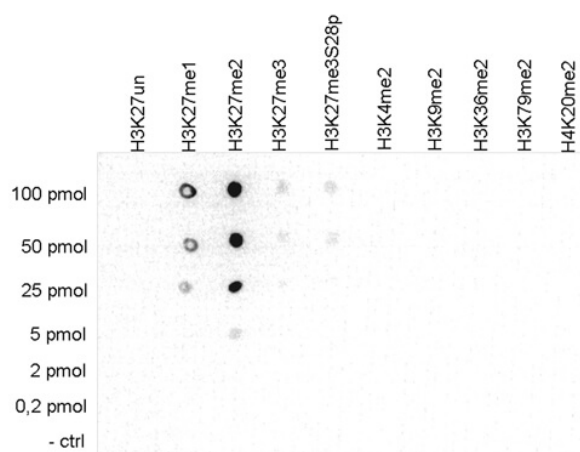
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	2.63 mg/ml by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.05% (w/v) Sodium Azide and 0.05% ProClin 300
Stabilizer:	None

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



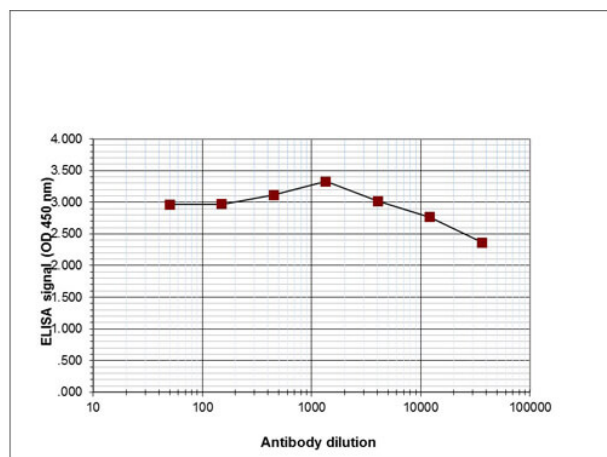
Dot Blot

Dot Blot results of Rabbit anti-Histone H3 K27 me2 antibody. Antigens: H3K27, H3K27me1, H3K27me2, H3K27me3, H3K27me3 S28p, H3K4me2, H3K9me2, H3K36me2, H3K79me2, H4K20me2. Load: 100pmol, 50pmol, 25pmol, 5pmol, 2pmol, 0.2pmol, and control. Primary antibody: Histone H3 K27 me2 antibody at 1:50,000 for 45 min at 4°C. Secondary antibody: anti-rabbit HRP secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO.

Immunofluorescence Microscopy

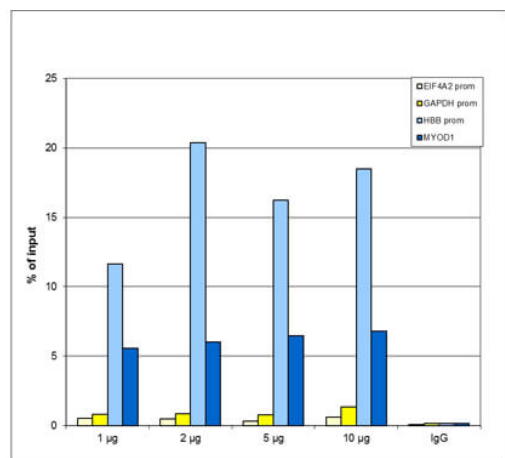
Immunofluorescence Microscopy results of Rabbit anti-Histone H3 K27 me2 antibody. Tissue: HeLa cells. Fixation: 4% formaldehyde for 10 min. Block: PBS/Triton X-100 / 5% normal goat serum and 1% BSA. Primary antibody: Histone H3 K27 me2 antibody at 1:500 for 1 hr at RT. Secondary antibody: anti-rabbit Alexa 488 secondary antibody at 1:10,000 for 45 min at RT. Staining: Histone H3 K27 me2 antibody as green fluorescent signal (left), with DAPI (middle), and a merge of the two stainings (right).





ELISA

ELISA results of Rabbit anti-Histone H3 K27 me2 antibody.
 Antigen: Histone H3 K27 me2. Coating amount: 0.1 µg per well. Dilution series: serial. Titer: 1:480,000 Histone H3 K27 me2 antibody. Substrate: TMB (p/n TMBE-1000).

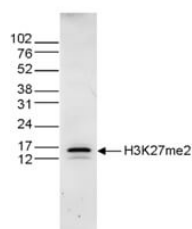


ChIP

Chromatin Immunoprecipitation Rabbit H3K27me2 Antibody. ChIP assays were performed using HeLa cells, the Anti-H3K27me2 Antibody, and optimized PCR primer sets for qPCR. ChIP was performed using sheared chromatin from 1 million cells. A titration of the antibody consisting of 1, 2, 5, and 10 µg per ChIP experiment was analyzed. IgG (2 µg/IP) was used as negative IP control. QPCR was performed with primers for the promoter of the active GAPDH and EIF4A2 genes, used as negative controls, and for the promoter of the inactive HBB and the coding region of the inactive MYOD1 genes, used as positive controls. This figure shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis). These results are in accordance with the observation that H3K27me2 is preferably present at silent genes.

Western Blot

Western Blot results of Rabbit anti-Histone H3 K27 me2 antibody. Lane 1: 15 µg of histone extracts from HeLa cells. Primary antibody: Rabbit anti-Histone H3 K27 me2 antibody at 1:1,000 overnight at 4°C. Secondary antibody: Peroxidase anti-rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: TBS-Tween / 5% BLOTTO. Predicted/Observed size: ~15 kDa for Rabbit Histone H3 K27 me2.



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.