

Datasheet for 600-401-W54**Histone H3 K27me1 Antibody****Overview**

Description:	Anti-Histone H3 [Monomethyl Lys27] (RABBIT) Antibody - 600-401-W54
Item No.:	600-401-W54
Size:	50 µg
Applications:	ChIP, Dot Blot, ELISA, IF, WB
Reactivity:	Human
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. Anti-Histone H3 K27 me1 Antibody is ideal for research in Chromatin Remodeling and Genetics.
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
Reactivity:	Human

PTM Specificity:	Methylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-Histone H3 K27 me1 Antibody was produced in rabbits by repeated immunizations with a synthetic peptide of histone H3 containing the monomethylated lysine 27.
Purity/Specificity:	Anti-Histone H3 k27 me1 Antibody was purified by affinity purification. This product reacts with human Histone 3 methyl Lys27. Cross reactivity with H3K27me1 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-Histone H3 K27 me1 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 15kDa 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:	1 µg per IP
ELISA:	1:500
IF:	1:1,000
WB:	1:1,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.93 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

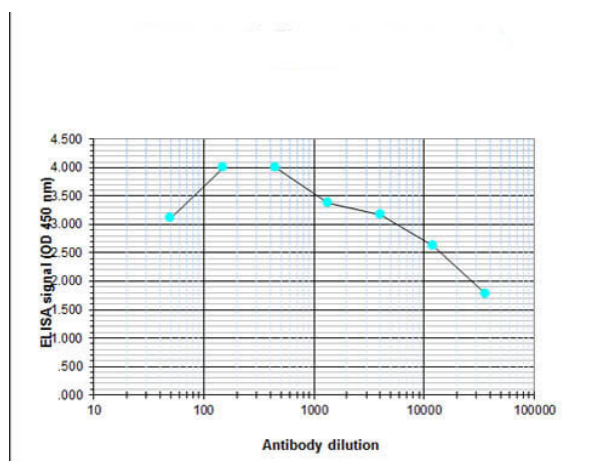
Shipping & Handling

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.

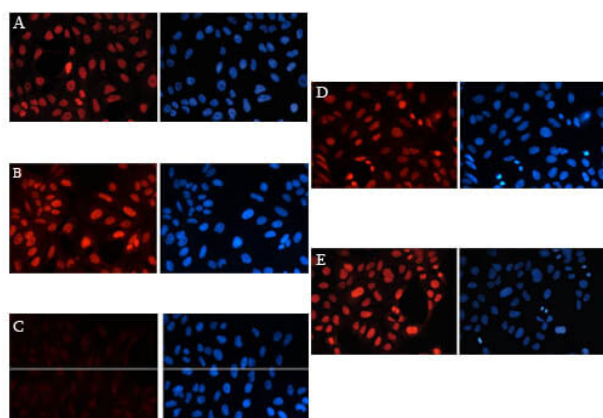
Expiration: Expiration date is one (1) year from date of receipt.

Images



ELISA

ELISA results of H3K27me1 antibody. Antigen: BSA coupled to H3K27me1. Coating amount: 0.1 µg per well. Dilution series: serial. Titer: 1:32,900 H3K27me1 antibody. Substrate: TMB (p/n TMBE-1000).



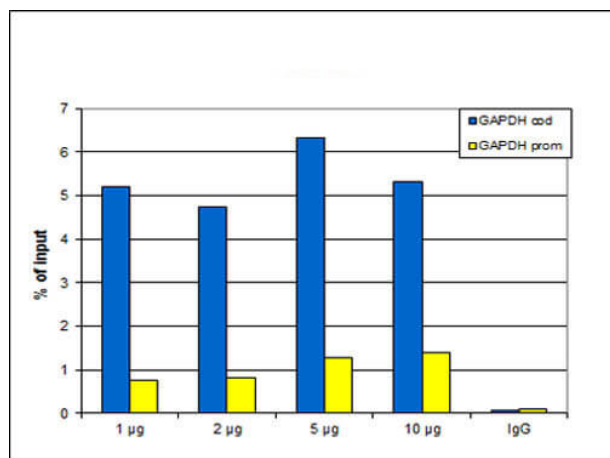
Immunofluorescence Microscopy

Immunofluorescence results of Anti-Histone H3K27me1 Antibody. Tissue: Human osteosarcoma (U2OS) cells. Fixation: 4% formaldehyde for 20 min. Block: PBS/Triton X-100 / 5% normal goat serum. Incubation: Figure A-E: H3K27me1 antibody 1:1,000. Figure B: 2ng/µl H3K27 peptide. Figure C: 2ng/µl H3K27me1 peptide. Figure D: 2ng/µl H3K27me2 peptide. Figure E: 2ng/µl H3K27me3 peptide. Secondary antibody: anti-rabbit Alexa568 secondary antibody at 1:10,000 for 45 min at RT (Left) or DAPI (right). Staining: Histone H3K27me1 antibody as (red) fluorescent signal, DAPI (blue).



Dot Blot

Dot Blot results of H3K27me1 antibody. Antigens: H3K27me1 and other modifications and unmodified sequences of histone H3 and H4. Load: 100 pmol, 50 pmol, 25 pmol, 5 pmol, 2 pmol, and 0.2 pmol with control. Primary antibody: H3K27me1 antibody at 1:20,000 for 45 min at 4°C. Secondary antibody: anti-rabbit HRP antibody at 1:20,000 for 45 min at RT. Block: 5% BLOTTO.

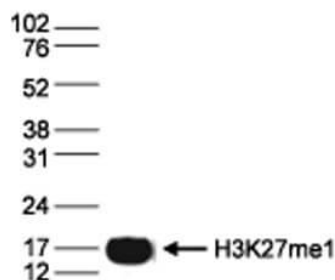


ChIP

Chromatin Immunoprecipitation Rabbit Anti-H3K27me1 Antibody. ChIP assays were performed using HeLa cells, H3K27me1 Antibody, and optimized PCR primer sets for qPCR. ChIP was performed using sheared chromatin from 100,000 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 and the coding region of the active gene GAPDH used as a negative and a positive control target, respectively. This figure shows the recovery, expressed as a % of input (the relative amount of immunoprecipitated DNA compared to input DNA after qPCR analysis).

Western Blot

Western Blot results of Rabbit anti-Histone H3K27me1 antibody. Lane 1: 15 µg of histone extracts from HeLa cells. Primary antibody: Rabbit anti-Histone H3 K27 me2 antibody at 1:1,000. 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.