Order online now!

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

Datasheet for 600-401-V36

Histone H2A.Zac Antibody

Overview

Description:	Anti-Histone H2 A.Zac (RABBIT) Antibody - 600-401-V36
Item No.:	600-401-V36
Size:	50 µg
Applications:	ChIP, Dot Blot, ELISA, IF, WB
Reactivity:	Human, Mouse, Broad
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. Acetylation of the histone H2A variant H2A.Z is associated with the promoters of active genes. Anti-H2A.Zac Antibody is ideal for research in Chromatin Remodeling and Epigenetics.
Synonyms:	Histone H2A.Z, H2A/z
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	H2AFZ
Reactivity:	Human, Mouse, Broad

PTM Specificity:	Acetylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-H2A.Zac Antibody was produced in rabbits by repeated immunization with a synthetic peptide containing the region of human histone H2A.Z acetylated at lysines 5, 7 and 11.
Purity/Specificity:	Anti-H2A.Zac Antibody was purified by affinity purification. Cross-reactivity with Histone 2A.Z acetylated is expected amongst a wide range of species due to homology.
Relevant Links:	• UniProtKB - P0C0S5 • GeneID - 3015 • NCBI - NP_002097

Application Details

Tested Applications:	ChIP, Dot Blot, ELISA, IF, WB
Application Note:	Anti-H2A.Zac Antibody is tested for Chromatin Immunoprecipitation, Dot Blotting, ELISA, Immunofluorescence and Western Blots. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 15 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:	1 µg/ChIP
ELISA:	1:500
IF:	1:500
WB:	1:1,000

Formulation

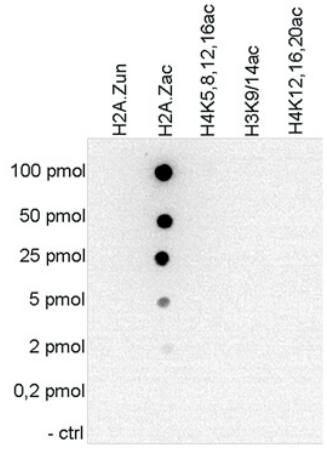
Physical State:	Liquid (sterile filtered)
Concentration:	1.09 mg/ml by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.05% (w/v) Sodium Azide and 0.05% ProClin 300
Stabilizer:	None

Shipping & Handling

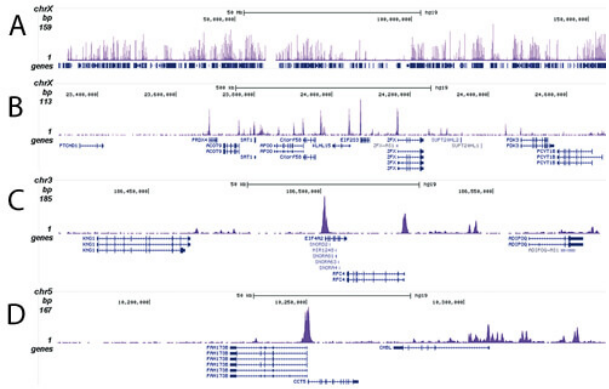
Shipping Condition:	Dry Ice

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.

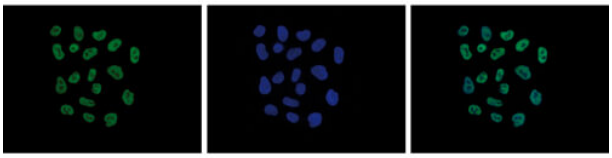
Images



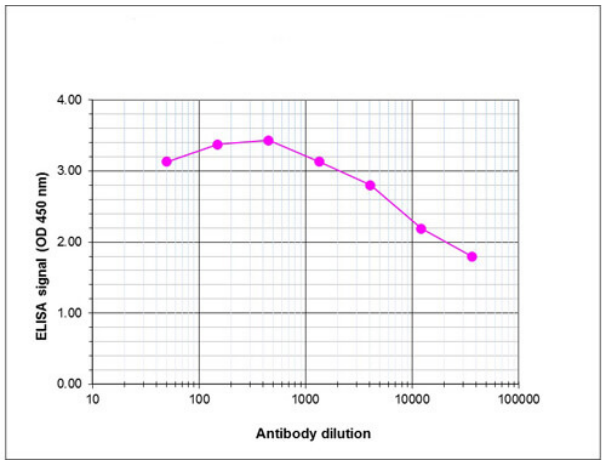
Dot Blot
Dot Blot results of Rabbit anti-Histone H2 A.Zac antibody. Antigens: H2A.Z, H2A.Zac, H4K5,8,12,16ac, H3K9/14ac, H4K12,16,20ac. Load: 100pmol, 50pmol, 25pmol, 5pmol, 2pmol, 0.2pmol, and control. Primary antibody: Histone H2 A.Zac antibody at 1:20,000 overnight at 4°C. Secondary antibody: anti-rabbit HRP secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO.



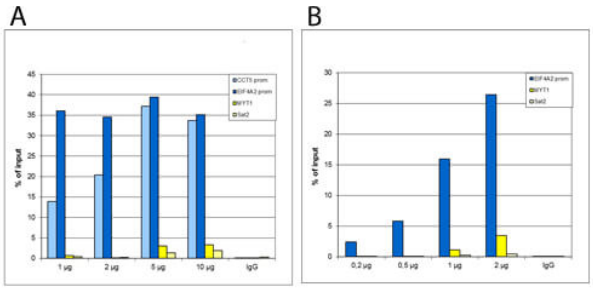
ChIP
Chromatin Immunoprecipitation Rabbit Histone H2A.Zac Antibody. ChIP was performed on sheared chromatin from 100,000 human K562 cells using 1 µg the anti-H2A.Zac antiobdy. The 36 bp tags were aligned to the human genome using the ELAND algorithm. Figure A shows the peak distribution along the complete sequence, a 1.5 Mb region of the X-chromosome (figure B), and in two regions surrounding the EIF4A2 and CCT5 positive control genes, respectively (figure C and D).



Immunofluorescence Microscopy
Immunofluorescence Microscopy results of Rabbit anti-Histone H2 A.Zac 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 H2 A.Zac 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 H2 A.Zac antibody as green fluorescent signal (left), DAPI blue (middle), and a merge of the two stainings (right).

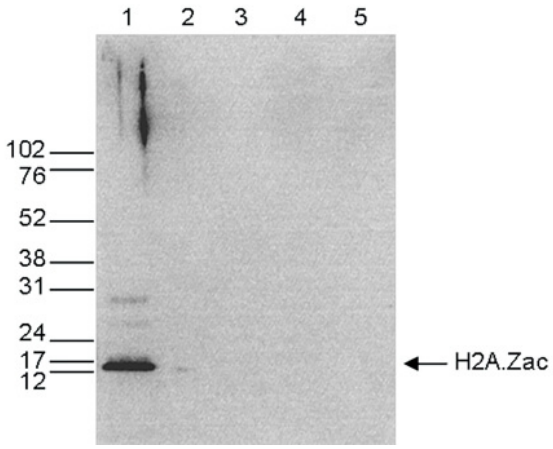


ELISA
ELISA results of Rabbit anti-Histone H2 A.Zac antibody. Antigen: H2A.Zac peptide. Coating amount: 0.1 µg per well. Dilution series: serial. Mid-point concentration: 1:56,600 Histone H2 A.Zac antibody. Secondary antibody: Peroxidase anti-rabbit secondary antibody at 1:20,000. Substrate: TMB (p/n TMBE-1000).



ChIP

Chromatin Immunoprecipitation Rabbit Histone H2A.Zac Antibody. Figure A: ChIP using HeLa cells, Rabbit Histone H2A.Zac Antibody, and optimized PCR primer pairs for qPCR. ChIP was performed using sheared chromatin from 1,000,000 cells. A titration consisting of 1, 2, 5 and 10 µg of antibody per ChIP experiment was analyzed. IgG (2 µg/IP) was used as a negative IP control. Figure B: ChIP using human K562 cells, Rabbit Histone H2A.Zac 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 0.2, 0.5, 1 and 2 µg per ChIP experiment was analyzed. IgG (1 µg/IP) was used as negative IP control. qPCR was performed with primers specific for the promoter of the active genes CCT5 and EIF4A2, used as positive controls, and for the coding region of the inactive MYT1 gene and the Sat2 satellite repeat, used as negative controls. These figures 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 H2 A.Zac antibody. Lane 1: 25 µg HeLa whole cell extracts. Lane 2: 1µg recombinant histone H2A. Lane 3: 1µg recombinant histone H2B. Lane 4: 1µg recombinant histone H3. Lane 5: 1µg recombinant histone H4. Primary antibody: anti-Histone H2A.Zac antibody at 1:1,000 overnight at 4°C. Secondary antibody: anti-rabbit HRP antibody at 1:10,000 for 45 min at RT. Block: TBS-Tween/5% BLOTTO. Predicted/Observed size: ~13.5 kDa for Histone H2 A.Zac.

Disclaimer