Datasheet for 600-401-I89

Histone H3 K36ac Antibody

Overview

Description:	Anti-Histone H3 [ac Lys36] (RABBIT) Antibody - 600-401-I89
Item No.:	600-401-I89
Size:	50 µg
Applications:	Dot Blot, IF, Multiplex, WB
Reactivity:	Human, C. elegans
Host Species:	Rabbit

Product Details

Background:	Histone H3 acetylation at lysine 36 results from the activity of GCN5, which regulates transcription. H3K36ac is usually found in the promoters of RNA polymerase II-transcribed genes. When acetylation of this lysine is replaced by methylation, the activation of transcription is eliminated. This switch-like activity seems to determine the chromatin function found in transcription units. Set2 associates with RNA polymerase II and histone H3 at lysine 36, and seems to be responsible for proper acetylation of coding regions. The co-activity of Set2 and Rpd3S is important for ensuring that transcription of intragenic sequences does not occur, and is related to the acetylation and methylation of histone H3 at lysine 36. 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 Ac Lys36 antibody, H3.3B, H3 histone, family 3A, H3.3AH3F3H3F3B, histone H3.3, MGC87783, MGC87782, H3K36ac
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST2H3C
Reactivity:	Human, C. elegans
PTM Specificity:	Acetylation

Immunogen Type:	Conjugated Peptide
Immunogen:	Histone H3 [ac Lys36] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic acetylated peptide surrounding Lysine 36 of human Histone H3.2.
Purity/Specificity:	Anti-Histone H3 [ac Lys36] 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, Multiplex, WB
Application Note:	Anti-Histone H3 [ac Lys36] antibody is tested for Western Blot, Immunocytochemistry, and Dot Blot. 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:	1:500
IHC:	1:500
WB:	1:1000

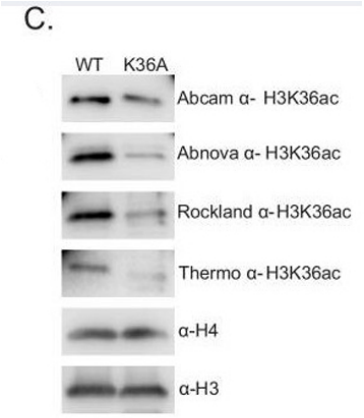
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 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

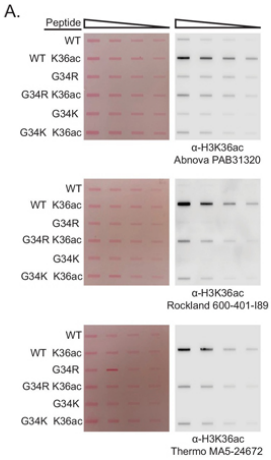
Shipping & Handling

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.

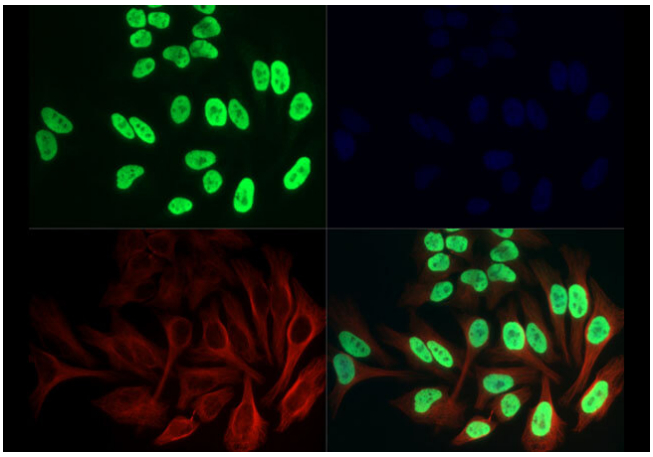
Images



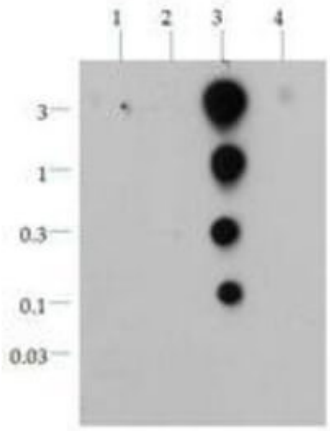
Western Blot
C) Western blot analysis of specificity of H3K36ac antibodies using WT and H3-K36A chromatin extracts (p/n 600–401-I89). Total H4 and H3 were used as loading controls. Fig 1. PMID: 33522486



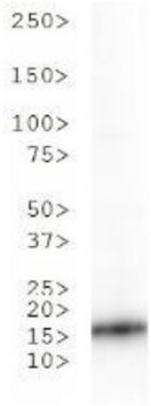
Western Blot
A) Slot blot analysis to quantitatively assess whether anti-K36 acetyl antibodies equivalently recognize WT, H3-G34R, or H3-G34K peptides bearing H3K36ac modification. Peptides were loaded in twofold serial dilution. Rockland p/n 600–401-I89; Ponceau-stained blots were used as the loading control (left). Fig 5. PMID: 33522486



Immunofluorescence Microscopy
Immunofluorescence of Anti-Histone H3 K36ac: Histone H3 Ac Lys36 antibody was tested at 1:200,000 in HeLa cells with FITC (green). Cells and nuclei were counterstained with DAPI (blue) and DyLight 550 (red). (40X)



Dot Blot
Dot Blot of Rabbit Anti-Histone H3 [Lys36 ac] Antibody. Lane 1: K36. Lane 2: K36-KMe2. Lane 3: K36-KAc. Lane 4: K36-KMe1. Load: 0.03, 0.1, 0.3, 1.0, 3.0 µg of peptide. Primary antibody: Histone H3 [Lys36 ac] for overnight at 4°C. Secondary antibody: HRP rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO A overnight at 4°C.



Western Blot
Western Blot of Rabbit Anti-Histone H3 [ac Lys36] Antibody. Lane 1: C. elegans embryo lysate. Load: 30 µg per lane. Primary antibody: Histone H3 [ac Lys36] at 1:1000 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.

References

- Lowe BR et al. Surprising phenotypic diversity of cancer-associated mutations of Gly 34 in the histone H3 tail. *Elife.* (2021)

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.