

Datasheet for 600-401-I72

Histone H3 K9ac Antibody

Overview

Description:	Anti-Histone H3 [ac Lys9] (RABBIT) Antibody - 600-401-I72
Item No.:	600-401-I72
Size:	50 µg
Applications:	ChIP, Dot Blot, IF, WB
Reactivity:	Human, Mouse, C. elegans
Host Species:	Rabbit

Product Details

Background:	Acetylation of histone H3 at the K9 residue is associated with chromosome condensation in mitotic cells. The presence of H3K9ac is correlated to H3K4 trimethylation, and their distribution is related to developmentally repressed genes in some species. It has been shown that neuron depolarization promotes intragenic histone acetylation leading toward the formation of this modification. In pituitary, dopamine receptor agonists lead toward apoptosis. However, in tumors, decreased availability and activity of these agonists, combined with decreased H3K9ac leads toward resistance to chemotherapies and cancer survival and proliferation. Nuclear receptor PPAR ' induces the enrichment of H3K9ac enrichment on downstream promoters, which has effects on transcription and ultimately nuclear receptor transactivation. 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 Lys9 antibody, H3.3B, H3 histone, family 3A, H3.3AH3F3H3F3B, histone H3.3, MGC87783, MGC87782, H3K9ac
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST2H3C
Reactivity:	Human, Mouse, C. elegans

PTM Specificity:	Acetylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Histone H3 [ac Lys9] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic acetylated peptide surrounding Lysine 9 of human Histone H3.2.
Purity/Specificity:	Anti-Histone H3 [ac Lys9] 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:	ChIP, Dot Blot, IF, WB
Application Note:	Anti-Histone H3 [ac Lys9] antibody is tested for Western Blot, Chromatin Immunoprecipitation, Dot Blot, and Immunofluorescence. 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.
ChIP:	2-5µg/million cells
IF:	1:100
IHC:	1:100
WB:	1:500

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.68 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

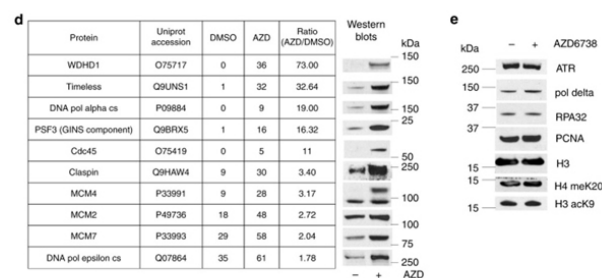
Shipping & Handling

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.

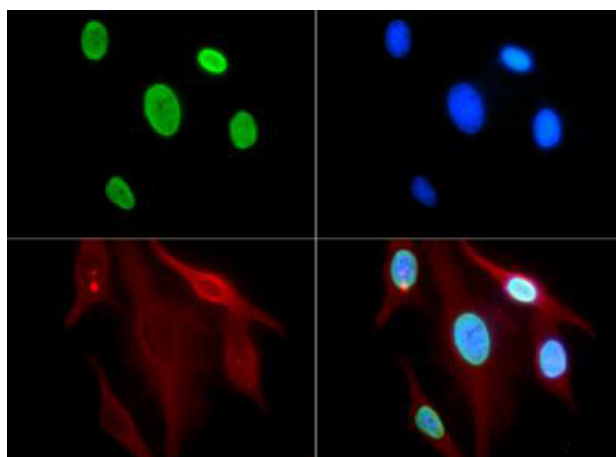
Expiration: Expiration date is one (1) year from date of receipt.

Images



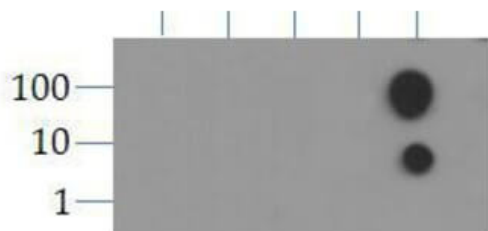
Western Blot

(d, e) 293T cells were treated with AZD6738 or DMSO for 30 min and then fractionated. Nuclease-insoluble fraction was analyzed by mass spectrometry showing increase of the proteins involved in replication. Western blots confirm the MS results. While ATR and RPA34 accumulate in the chromatin after treatments with DNA damaging agents, neither of these proteins were recruited to the chromatin in cells treated with ATRi alone in Fig. 1e. (p/n 600-401-I72, H3 acK9; 600-401-J01 H4, meK20) Fig 1. PMID: 29123096



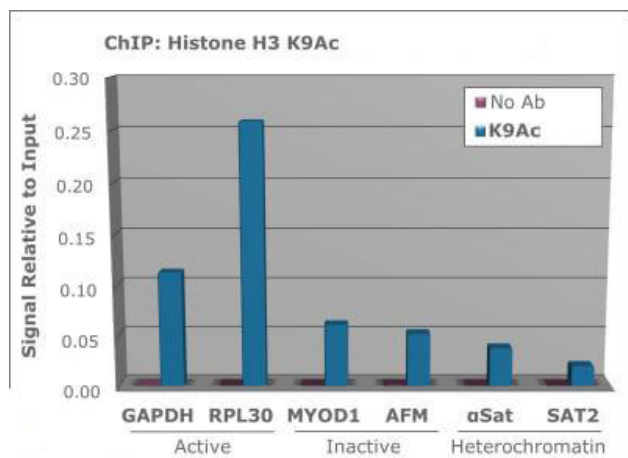
Immunofluorescence Microscopy

Immunofluorescence of Rabbit Anti-Histone H3 [ac Lys9] Antibody. Tissue: HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [ac Lys9] antibody at a 1:100 dilution for 1 h at RT. Secondary antibody: FITC secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone H3 [ac Lys9] is nuclear and chromosomal. Staining: Histone H3 [ac Lys9] is expressed in green.



Dot Blot

Dot Blot of Rabbit Histone H3 [ac Lys9] Antibody. Lane 1: K9. Lane 2: K9 Me1. Lane 3: K9 Me2. Lane 4: K9 Me3. Lane 5: K9ac. Load: 1, 10, and 100 picomoles of peptide. Primary antibody: Histone H3 [ac Lys9] antibody at 1:1000 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.



ChIP

Chromatin Immunoprecipitation of Rabbit Anti-Histone H3 [ac Lys9] Antibody. Chromatin from one million formaldehyde cross-linked HeLa cells was used with 2 ug of Anti-Histone H3 K9ac was used to IP DNA from fixed HeLa cells alongside a no antibody (No Ab) control. DNA was measured by qRT-PCR and normalized to total input (input=1).

250>

150>

100>

75>

50>

37>

25>

20>

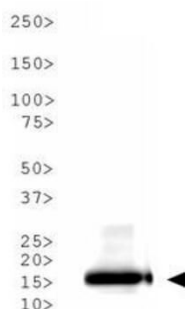
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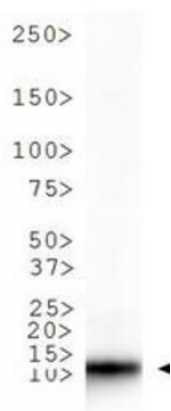
Western Blot

Western Blot of Rabbit Anti-Histone H3 [ac Lys9] Antibody. Lane 1: HeLa histone preps. Load: 30 µg per lane. Primary antibody: Histone H3 [ac Lys9] at 1:500 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.



Western Blot

Western Blot of Rabbit Anti-Histone H3 [ac Lys9] Antibody.
 Lane 1: NIH-3T3 histone preps. Load: 30 µg per lane.
 Primary antibody: Histone H3 [ac Lys9] at 1:500 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.



Western Blot

Western Blot of Rabbit Anti-Histone H3 [ac Lys9] Antibody.
 Lane 1: C. elegans embryo lysate. Load: 30 µg per lane.
 Primary antibody: Histone H3 [ac Lys9] at 1:500 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

- Moiseeva et al. ATR kinase inhibition induces unscheduled origin firing through a Cdc7-dependent association between GINS and And-1. *Nature Communications* (2017)

Disclaimer

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