Datasheet for 600-401-I60

Histone H3 K4ac Antibody

Overview

Description:	Anti-Histone H3 [ac Lys4] (RABBIT) Antibody - 600-401-I60
Item No.:	600-401-I60
Size:	50 µg
Applications:	ChIP, Dot Blot, IF, Multiplex, WB
Reactivity:	Human, Mouse, C. elegans
Host Species:	Rabbit

Product Details

Background:	In transcription, H3K4Ac is prevalent at the promoters of active genes. Usually, this modification peaks in the cell cycle after dimethylation of H3K9 occurs, which indicates that there are sequential actions of these two modifications. Methylation that occurs on H3K4 concurrently with acetylation seems to act as an adjuster to the activation effects of acetylation. Shugoshin protein cannot bind to the centromere of active cells when H3K4 is acetylated, which reduces dimethylation, and thus slows meiosis and mitosis. Usually, H3K4Ac is a transitional modification, and will become further modified with methylation as transcription progresses, indicating complex transcriptional regulation. 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 Lys4 antibody, H3.3AH3F3H3F3B, H3.3B, H3 histone, family 3A, histone H3.3, MGC87783, MGC87782, H3K4ac
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 Lys4] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic acetylated peptide surrounding Lysine 4 of human Histone H3.2.
Purity/Specificity:	Anti-Histone H3 [ac Lys4] 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, Multiplex, WB
Application Note:	Anti-Histone H3 [ac Lys4] antibody is tested for Western Blot, Immunocytochemistry, Immunofluorescence, Chromatin Immunoprecipitation, 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.
ChIP:	2-5µg/million cells
IF:	1:1000
IHC:	1:1000
WB:	1:500

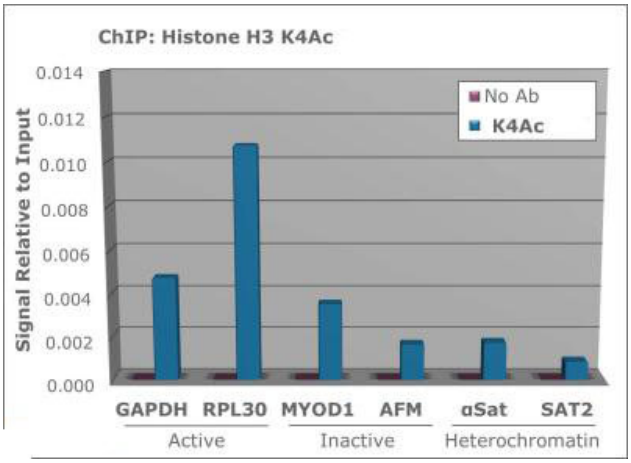
Formulation

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

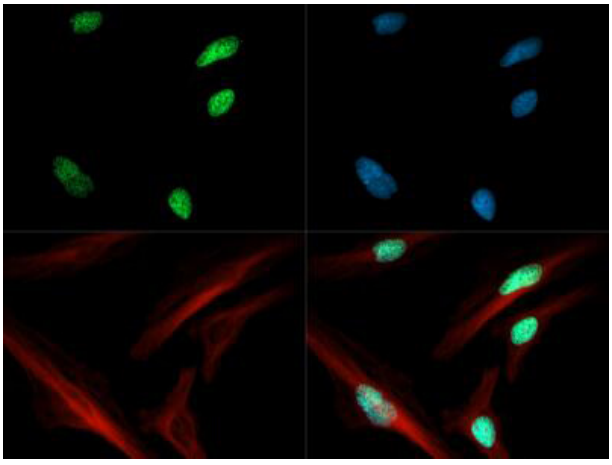
Shipping & Handling

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.

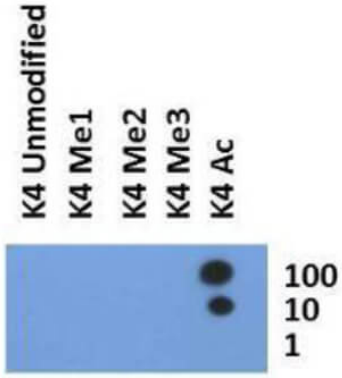
Images



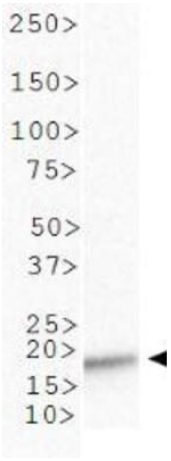
ChIP
Chromatin Immunoprecipitation of Rabbit Anti-Histone H3 [ac Lys4] Antibody. Chromatin from one million formaldehyde cross-linked Hela cells was used with 2ug of Anti-Histone H3 K4ac and 20ul of magnetic IgG beads per immunoprecipitation. A no antibody (No Ab) control was also used. Immunoprecipitated DNA was quantified using quantitative real-time PCR and SYBR green dye, then normalized to the non-precipitated input chromatin, which is equal to one.



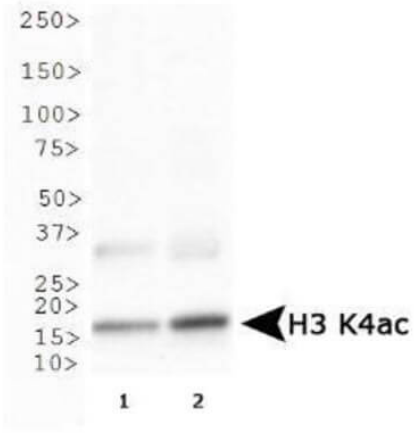
Immunofluorescence Microscopy
Immunofluorescence of Rabbit Anti-Histone H3 [ac Lys4] Antibody. Tissue: HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H3 [ac Lys4] antibody at a 1:50 dilution for 1 h at RT. Secondary antibody: Dylight 488 secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone H3 [ac Lys4] is nuclear and chromosomal. Staining: Histone H3 [ac Lys4] is expressed in green and the nuclei and alpha-tubulin are counterstained with DAPI (blue) and Dylight 566 (red).



Dot Blot
Dot Blot of Rabbit Histone H3 [ac Lys4] Antibody. Lane 1: K4 umodified. Lane 2: K4 Me1. Lane 3: K4 Me2. Lane 4: K4 Me3. Lane 5: K4 Ac. Load: 1, 10, and 100 picomoles of peptide. Primary antibody: Histone H3 [ac Lys4] 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.



Western Blot
Western Blot of Rabbit Anti-Histone H3 [ac Lys4] Antibody. Lane 1: C. elegans embryo lysate. Load: 30 µg per lane. Primary antibody: Histone H3 [ac Lys4] 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: ~15-16 kDa. Other band(s): None.



Western Blot
Western Blot of Rabbit Anti-Histone H3 [ac Lys4] Antibody. Lane 1: HeLa histone prep. Lane 2: NIH-3T3 prep lysates. Load: 30 µg per lane. Primary antibody: Histone H3 [ac Lys4] 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.

Disclaimer

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