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Datasheet for 600-401-I99

Histone H4 K8ac Antibody

Overview

Description:	Anti-Histone H4 [ac Lys8] (RABBIT) Antibody - 600-401-I99
Item No.:	600-401-I99
Size:	50 µg
Applications:	ChIP, Dot Blot, IF, Multiplex, WB
Reactivity:	Human, Mouse, C. elegans
Host Species:	Rabbit

Product Details

Background:	Chromatin is the arrangement of DNA and proteins in which chromosomes are formed. Correspondingly, chromatin is formed from nucleosomes, which are comprised of a set of four histone proteins (H2A, H2B, H3, H4) wrapped with DNA. Chromatin is a very dynamic structure in which numerous post-translational modifications work together to activate or repress the availability of DNA to be copied, transcribed, or repaired. These marks decide which DNA will be open and commonly active (euchromatin) or tightly wound to prevent access and activation (heterochromatin). Common histone modifications include methylation of lysine and arginine, acetylation of lysine, phosphorylation of threonine and serine, and sumoylation, biotinylation, and ubiquitylation of lysine. In particular, acetylation of H4 Lys5 (H4 Lys5Ac) has been linked to transcriptional activation and DNA repair. Newly assembled histones are typically acetylated on H4 at lysine 5 and 12. The enzyme histone acetyltransferase 1 (HAT1) is the primary modulator, and these marks are necessary for complete chromatin assembly. Anti-Histone H4 are ideal for researchers interested in Chromatin Research, DNA replication Transcription Translation and Splicing, Epigenetics, Chromatin Modifiers, Histones and Modified Histones, DNA Repair, and HA Epitope Tags research.
Synonyms:	rabbit anti-Histone H4 Ac Lys8 antibody, H4K8ac, HIST2H4B, HIST1H4H, HIST1H4I, HIST1H4J, HIST1H4K, HIST1H4L, HIST2H4, HIST2H4A, HIST1H4A, HIST1H4B, HIST1H4C, HIST1H4D, HIST1H4E, HIST1H4F, histone cluster 4, H4, histone 4, H4
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HIST4H4
Reactivity:	Human, Mouse, C. elegans
PTM Specificity:	Acetylation
Immunogen Type:	Conjugated Peptide
Immunogen:	Histone H4 [ac Lys8] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic acetylated peptide surrounding Lysine 8 of human Histone H4.
Purity/Specificity:	Anti-Histone H4 [ac Lys8] was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody reacts with human Histone H4. A BLAST analysis was used to suggest cross-reactivity with Human, mouse, and C. elegans. Cross-reactivity with Histone H4 from other sources has not been determined.
Relevant Links:	• UniProtKB - P62805 • NCBI - NP_001029249 • GeneID - 121504

Application Details

Tested Applications:	ChIP, Dot Blot, IF, Multiplex, WB
Application Note:	Anti-Histone H4 [ac Lys8] antibody is tested for Western Blot, Dot Blot, Chromatin Immunoprecipitation, and Immunofluorescence/Immunocytochemistry. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~13 kDa corresponding to Histone H4 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:	1:1000-1:2000
IHC:	1:1000-1:2000
WB:	0.2µg/mL

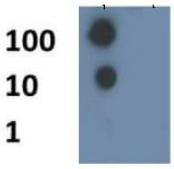
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	0.85 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

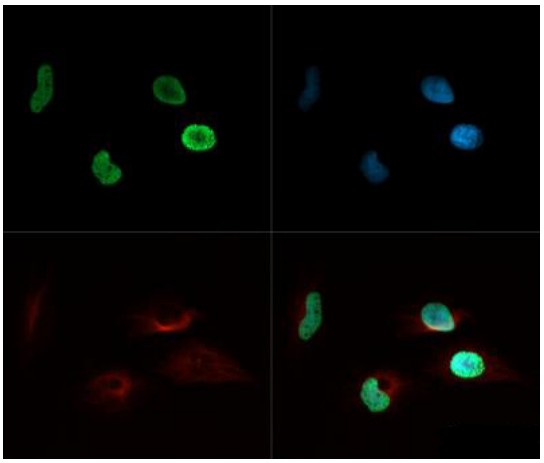
Shipping & Handling

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.

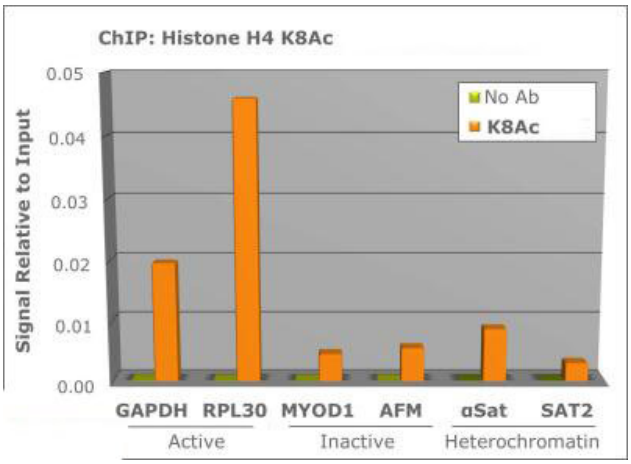
Images



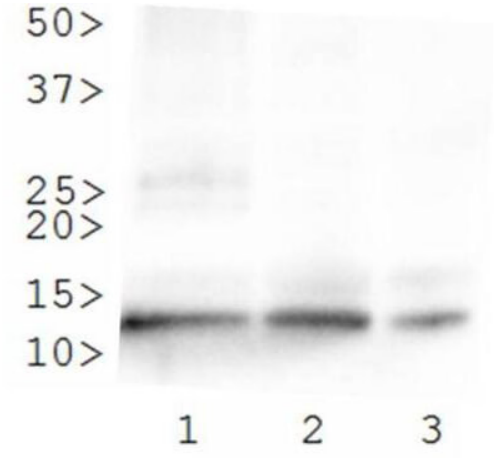
Dot Blot
Dot Blot of Rabbit Histone H4 [ac Lys8] Antibody. Lane 1: K8 Ac. Lane 2: K8 unmodified. Load: 1, 10, and 100 picomoles of peptide. Primary antibody: Histone H4 [ac Lys8] antibody at 1:1000 for 45 min at 4°C. Secondary antibody: Dylight™488 rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C.



Immunofluorescence Microscopy
Immunofluorescence of Rabbit Anti-Histone H4 [ac Lys8] Antibody. Tissue: HeLa cells. Fixation: 0.5% PFA. Antigen retrieval: Not required. Primary antibody: Histone H4 [ac Lys8] antibody at a 1:100 dilution for 1 h at RT. Secondary antibody: Dylight 488 secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone H4 [ac Lys8] is nuclear. Staining: Histone H4 [ac Lys8] is expressed in green, nuclei and alpha-tubulin are counterstained with DAPI (blue) and Dylight 550 (red).



ChIP
Chromatin Immunoprecipitation Rabbit Anti-Histone H4 [ac Lys8] Antibody. Chromatin from one million formaldehyde cross-linked HeLa cells was used with 2ug of Anti-Histone H4 K8ac 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.



Western Blot
Western Blot of Rabbit Anti-Histone H4 [ac Lys8] Antibody. Lane 1: HeLa histone prep. Lane 2: 3T3 histone prep. Lane 3: C. elegans embryo lysate. Load: 30 µg per lane. Primary antibody: Histone H4 [ac Lys8] at 0.2 µg/ml 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: ~11 kDa. Other band(s): None.

Disclaimer

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