Datasheet for ABIN5706759

anti-Histone 3 antibody (H3K27ac)

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Overview

Quantity:	50 µg
Target:	Histone 3 (H3)
Binding Specificity:	H3K27ac
Reactivity:	Human, Mouse, Monkey, C. elegans
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Histone 3 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunoprecipitation (IP), Dot Blot (DB)

Product Details

Purpose:	Histone H3 K27ac Antibody
Immunogen:	Immunogen: Histone H3 [ac Lys27] affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide surrounding the K27ac site of human Histone H3. Immunogen Type: Conjugated Peptide
Isotype:	IgG
Cross-Reactivity (Details):	A BLAST analysis was used to suggest cross-reactivity with Human, mouse, rat, and C.
Characteristics:	Synonyms: rabbit anti-Histone H3 Ac Lys27 antibody, Histone H3 (K27 modification), H3 K27-Ac, H3.3B, H3 histone, family 3A, H3.3AH3F3H3F3B, histone H3.3, MGC87783, MGC87782, H3K27ac
Purification:	Anti-Histone H3 [ac Lys27] was affinity purified from monospecific antiserum by

Product Details

	immunoaffinity chromatography.
Sterility:	Sterile filtered

Target Details

Target:	Histone 3 (H3)
Alternative Name:	Histone H3 (H3 Products)
Background:	Background: The nucleosome is comprised of 146 bp of DNA wrapped around a series of histone proteins arranged as an octamer consisting of 2 copies of histone H2A, H2B, H3 and H4. Within the nucleosome core the histone proteins are covalent modified at specific residues predominantly within the N-terminal tail including lysine (acetylation, methylation, SUMOylation, and ubiquitinylation), arginine methylation and citrullination, serine and threonine phosphorylation, as well as proline isomerization. The lysine side chains can carry up to three methyl groups (mono-, di- and tri- methylated forms) and the arginine side chain can be monomethylated or can be dimethylated as the symmetric or asymmetric forms. The modifications show temporal, disease-specific, and other types of cell-specific regulation and there are specific families of enzymes that regulate the methylation, demethylation, acetylation, deacetylation and other modifications. Research has indicated that whereas the histone mark H3K4Me3 (tri-methyl lysine 4 of histone H3) localizes to gene promoter regions (it is associated with transcriptional activation) other modifications at H3K4 such as monomethyl is present predominantly at enhancer sequences. Specific marks have been shown to be associated with the activation (H3K9Me1, H3K27Me1, and H4K20Me1) or repression (H3K9Me2 and Me3, H3K27Me2 and Me3, and H4K20Me2 and Me3) of genes. Monomethylation of H4 at K20, catalyzed by SET8, is essential to genome replication and stability. Multiple DNA breaks are associated with demethylation at this site, resulting in activation of p53 to avoid mitosis and aberrant chromosomal activity. In mammalian stem cells, Xist expression blocks the formation of H4K20me1, which is one of the first examples of a direct connection between chromatin and stem cell differentiation. Anti-Histone H3 are ideal for researchers interested in Chromatin Research, Epigenetics, Chromatin Modifiers, Histones and Modified Histones, and Phospho Specific research.
Gene ID:	126961
NCBI Accession:	NP_001005464
UniProt:	Q71DI3

Application Details

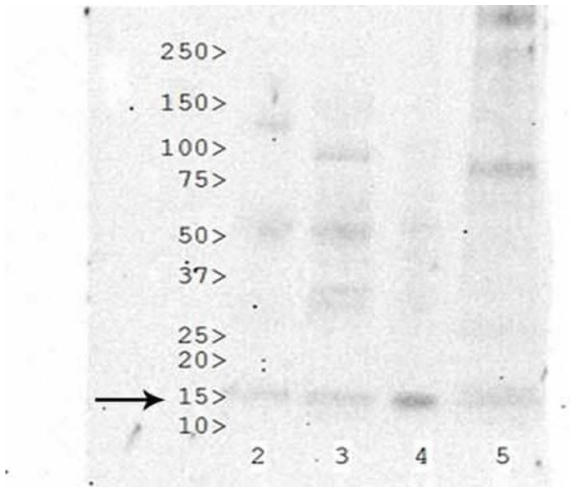
Application Notes:	Application Note: Anti-Histone H3 [ac Lys27] antibody is tested for Dot Blot and Western Blot. This antibody is suitable in ELISA. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~15.4 kDa corresponding to the appropriate cell lysate or extract. Epi-Plus™ antibody production in collaboration with Novus Biologicals. Western Blot Dilution: 1:500-1:1000 Immunoprecipitation Dilution: 1:100 ELISA Dilution: 1: 10,000 Other: User Optimized
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.37 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: 30 % Glycerol Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	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.
Expiry Date:	12 months

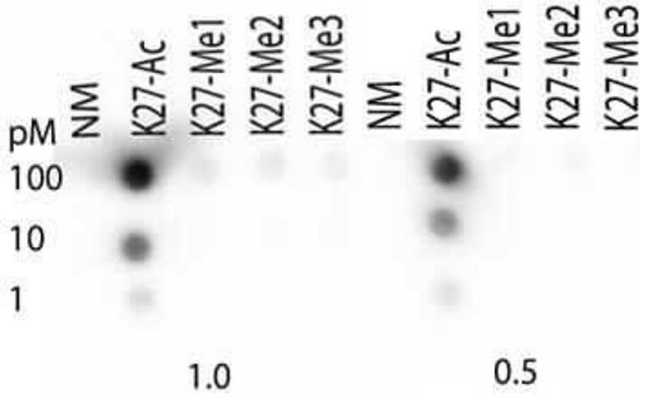
Publications

Product cited in:	Mika, Luelling, Pavek, Nartker, Heyneman, Jones, Barrott: "Epigenetic Changes at the Birc5 Promoter Induced by YM155 in Synovial Sarcoma." in: **Journal of clinical medicine**, Vol. 8, Issue 3, (2019) (PubMed).



Western Blotting

Image 1. Western Blot of Histone H3 [ac Lys27] (RABBIT) Antibody. Western Blot analysis against untreated cell extracts. Lane 2: HeLa cell lysates. Lane 3: NIH/3T3 cell lysates. Lane 4: Cos 7 cell lysates. Lane 5: C. Elegans lysates. Load: 35 µg per lane. Primary antibody: Histone H3 [ac Lys27] antibody at 1:400 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 for Histone H3 [ac Lys27]. Other band(s): non-specific.



Dot Blot

Image 2. Dot Blot of Rabbit Histone H3 [ac Lys27] Antibody. Lane 1: K27 unmodified. Lane 2: K27-Ac. Lane 3: K27-Me1. Lane 4: K27-Me2. Lane 5: K27-Me3. Load: 1, 10, and 100 picomoles of peptide. Primary antibody: Histone H3 [ac Lys27] antibody at 1:1000 for 45 min at 4 °C. Secondary antibody: RABBIT IgG (H&L) Secondary Antibody Peroxidase Conjugated Pre-adsorbed at 1:40,000 for 30 min at RT. Block: 5 % BLOTTO 30 minutes at RT.