

Product datasheet

Anti-Histone H2B (formyl K116) antibody ab235424

2 Images

Overview

Product name	Anti-Histone H2B (formyl K116) antibody
Description	Rabbit polyclonal to Histone H2B (formyl K116)
Host species	Rabbit
Tested applications	Suitable for: WB, ICC/IF
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide corresponding to Human Histone H2B (formyl K116). Database link: P62807
Positive control	ICC/IF: HeLa cells (treated with 30mM sodium butyrate for 4hr). WB: HEK-293, A549, K562 and Jurkat whole cell lysates, treated (+) with 30mM sodium butyrate for 4hr.
General notes	<p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.</p> <p>Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.</p>

Properties

Form	Liquid
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Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Constituents: 50% Glycerol (glycerin, glycerine), PBS, 0.03% Proclin 300
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab235424** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

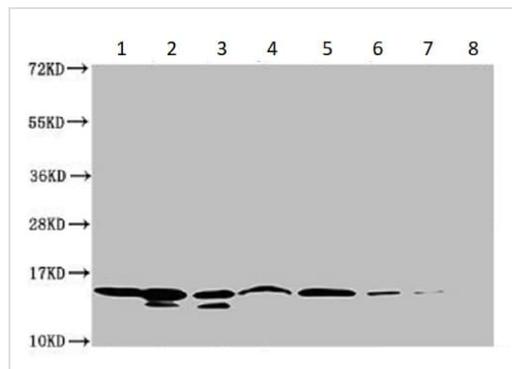
Application	Abreviews	Notes
WB		1/100 - 1/1000. Predicted molecular weight: 14 kDa.
ICC/IF		1/50 - 1/200.

Target

Relevance

Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling. Subunit structure The nucleosome is a histone octamer containing two molecules each of H2A, H2B, H3 and H4 assembled in one H3-H4 heterotetramer and two H2A-H2B heterodimers. The octamer wraps approximately 147 bp of DNA. Post-translational modification Monoubiquitination at Lys-35 (H2BK34Ub) by the MSL1/MSL2 dimer is required for histone H3 'Lys-4' (H3K4me) and 'Lys-79' (H3K79me) methylation and transcription activation at specific gene loci, such as HOXA9 and MEIS1 loci. Similarly, monoubiquitination at Lys-121 (H2BK120Ub) by the RNF20/40 complex gives a specific tag for epigenetic transcriptional activation and is also prerequisite for histone H3 'Lys-4' and 'Lys-79' methylation. It also functions cooperatively with the FACT dimer to stimulate elongation by RNA polymerase II. H2BK120Ub also acts as a regulator of mRNA splicing: deubiquitination by USP49 is required for efficient cotranscriptional splicing of a large set of exons. Phosphorylation at Ser-37 (H2BS36ph) by AMPK in response to stress promotes transcription. Phosphorylated on Ser-15 (H2BS14ph) by STK4/MST1 during apoptosis; which facilitates apoptotic chromatin condensation. Also phosphorylated on Ser-15 in response to DNA double strand breaks (DSBs), and in correlation with somatic hypermutation and immunoglobulin class-switch recombination. GlcNAcylation at Ser-113 promotes monoubiquitination of Lys-121. It fluctuates in response to extracellular glucose, and associates with transcribed genes. Crotonylation (Kcr) is specifically present in male germ cells and marks testis-specific genes in post-meiotic cells, including X-linked genes that escape sex chromosome inactivation in haploid cells. Crotonylation marks active promoters and enhancers and confers resistance to transcriptional repressors. It is also associated with post-meiotically activated genes on autosomes.

Images



Western blot - Anti-Histone H2B (formyl K116) antibody (ab235424)

All lanes : Anti-Histone H2B (formyl K116) antibody (ab235424) at 1/100 dilution

Lane 1 : HEK-293 (human epithelial cell line from embryonic kidney) (Treated with 30 mM sodium butyrate for 4 hours) whole cell lysate

Lane 2 : A549 (human lung carcinoma cell line) (Treated with 30 mM sodium butyrate for 4 hours) whole cell lysate

Lane 3 : K562 (human chronic myelogenous leukemia cell line from bone marrow) (Treated with 30 mM sodium butyrate for 4 hours) whole cell lysate

Lane 4 : Jurkat (human T cell leukemia cell line from peripheral blood) (Treated with 30 mM sodium butyrate for 4 hours) whole cell lysate

Lane 5 : Non-treated HEK-293 whole cell lysate

Lane 6 : Non-treated A549 whole cell lysate

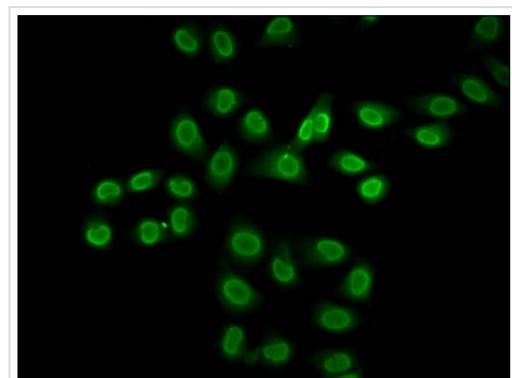
Lane 7 : Non-treated K562 whole cell lysate

Lane 8 : Non-treated Jurkat whole cell lysate

Secondary

All lanes : Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 14 kDa



Immunocytochemistry/ Immunofluorescence - Anti-Histone H2B (formyl K116) antibody (ab235424)

HeLa (human epithelial cell line from cervix adenocarcinoma) (Treated with 30 mM sodium butyrate for 4 hours) cells stained for Histone H2B (formyl K116) using ab235424 at 1/50 dilution in ICC/IF.

The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal goat serum. The cells were then incubated with the primary antibody overnight at 4°C. Secondary used is an Alexa-Fluor®488-conjugated Goat Anti-Rabbit IgG (H+L). Counterstained with DAPI.

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