

Product datasheet

Anti-Histone H4 (propionyl K16) antibody ab240612

1 Image

Overview

Product name	Anti-Histone H4 (propionyl K16) antibody
Description	Rabbit polyclonal to Histone H4 (propionyl K16)
Host species	Rabbit
Tested applications	Suitable for: WB
Immunogen	Synthetic peptide within Human Histone H4 (propionyl K16). The exact sequence is proprietary. Database link: P62805
Positive control	WB: HeLa, A549, HEK-293 and K562, treated with 10 mM sodium propionate for 4 hours, whole cell lysates.
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
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 **ab240612** 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: 11 kDa.

Target

Relevance

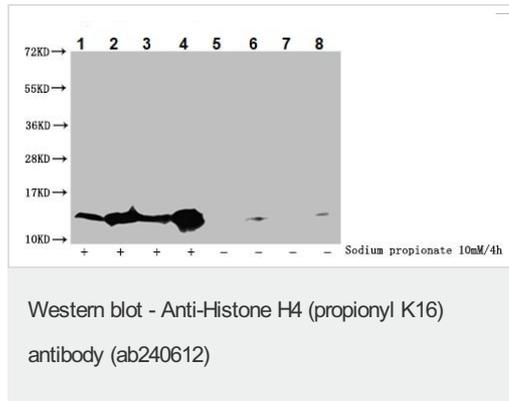
Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling. Involvement in disease Chromosomal aberrations involving HISTONE H4 is a cause of B-cell non-Hodgkin lymphomas (B-cell NHL). Translocation t(3;6)(q27;p21), with BCL6. Post-translational modification Acetylation at Lys-6 (H4K5ac), Lys-9 (H4K8ac), Lys-13 (H4K12ac) and Lys-17 (H4K16ac) occurs in coding regions of the genome but not in heterochromatin. Citrullination at Arg-4 (H4R3ci) by PAD4 impairs methylation. Monomethylation and asymmetric dimethylation at Arg-4 (H4R3me1 and H4R3me2a, respectively) by PRMT1 favors acetylation at Lys-9 (H4K8ac) and Lys-13 (H4K12ac). Demethylation is performed by JMJD6. Symmetric dimethylation on Arg-4 (H4R3me2s) by the PRDM1/PRMT5 complex may play a crucial role in the germ-cell lineage. Monomethylated, dimethylated or trimethylated at Lys-21 (H4K20me1, H4K20me2, H4K20me3). Monomethylation is performed by SET8. Trimethylation is performed by SUV420H1 and SUV420H2 and induces gene silencing. Phosphorylated by PAK2 at Ser-48 (H4S47ph). This phosphorylation increases the association of H3.3-H4 with the histone chaperone HIRA, thus promoting nucleosome assembly of H3.3-H4 and inhibiting nucleosome assembly of H3.1-H4. Ubiquitinated by the CUL4-DDB-RBX1 complex in response to ultraviolet irradiation. This may weaken the interaction between histones and DNA and facilitate DNA accessibility to repair proteins. Monoubiquitinated at Lys-92 of histone H4 (H4K91ub1) in response to DNA damage. The exact role of H4K91ub1 in DNA damage response is still unclear but it may function as a licensing signal for additional histone H4 post-translational modifications such as H4 Lys-21 methylation (H4K20me). Sumoylated, which is associated with transcriptional repression. 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. 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.

Cellular localization

Nuclear

Images



All lanes : Anti-Histone H4 (propionyl K16) antibody (ab240612) at 1/100 dilution

Lane 1 : Hela (human epithelial cell line from cervix adenocarcinoma) whole cell lysate, treated (+) with 10mM Sodium propionate for 4hr

Lane 2 : A549 (human lung carcinoma cell line) whole cell lysate, treated (+) with 10mM Sodium propionate for 4hr

Lane 3 : HEK-293 (human epithelial cell line from embryonic kidney) whole cell lysate, treated (+) with 10mM Sodium propionate for 4hr

Lane 4 : K562 (human chronic myelogenous leukemia cell line from bone marrow) whole cell lysate, treated (+) with 10mM Sodium propionate for 4hr

Lane 5 : Hela whole cell lysate, untreated (-)

Lane 6 : A549 whole cell lysate, untreated (-)

Lane 7 : HEK-293 whole cell lysate, untreated (-)

Lane 8 : K562 whole cell lysate, untreated (-)

Secondary

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

Predicted band size: 11 kDa

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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