abcam

Product datasheet

Anti-Histone H4 (acetyl K8) antibody - ChIP Grade ab15823

5 Abreviews 70 References 5 图像

概述

产品名称	Anti-Histone H4 (acetyl K8)抗体- ChIP Grade
描述	兔多克隆抗体to Histone H4 (acetyl K8) - ChIP Grade
宿主	Rabbit
经测试应用	**适用于:** IHC-P, ChIP, WB, ICC/IF
种属反应性	**与反应:** Cow, Human **预测可用于:** Mouse, Chicken, Saccharomyces cerevisiae
免疫原	Synthetic peptide corresponding to Human Histone H4 aa 1-100 (internal sequence) (acetyl K8) conjugated to Keyhole Limpet Haemocyanin (KLH). Database link: **P62805** (Peptide available as **ab15824**)
阳性对照	ChIP: Chromatin was prepared from U2OS cells. IHC-P: Human breast adenocarcinoma tissue. WB: Calf Thymus Histone Preparation Nuclear Lysate. ICC/IF: HeLa cells.
常规说明	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. 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, along with publications, customer reviews and Q&As

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
存储溶液	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

纯度	Immunogen affinity purified
克隆	**多克隆**
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab15823于以下的经测试应用**

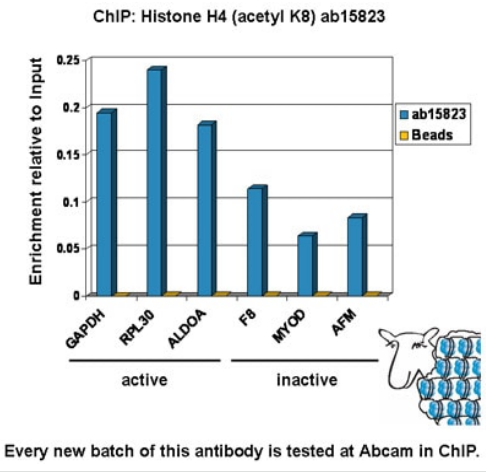
"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
IHC-P		Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ChIP	★★★★★ (2)	Use 2µl for 10^6 cells.
WB	★★★★★ (1)	Use a concentration of 1 µg/ml. Detects a band of approximately 12 kDa (predicted molecular weight: 11.2 kDa).
ICC/IF	★★★☆☆ (2)	Use a concentration of 0.1 - 1 µg/ml.

靶标

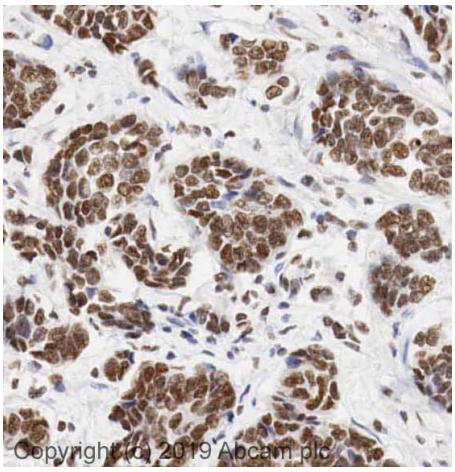
功能	Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling.
序列相似性	Belongs to the histone H4 family.
翻译后修饰	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 PADI4 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. 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.
细胞定位	Nucleus. Chromosome.

图片



ChIP - Anti-Histone H4 (acetyl K8) antibody - ChIP Grade (ab15823)

Chromatin was prepared from U2OS cells according to the Abcam X-ChIP protocol. Cells were fixed with formaldehyde for 10 min. The ChIP was performed with 25 µg of chromatin, 2 µg of ab15823 (blue), and 20 µl of Protein A/G sepharose beads. No antibody was added to the beads control (yellow). The immunoprecipitated DNA was quantified by real time PCR (Taqman approach). Primers and probes are located in the first kb of the transcribed region.

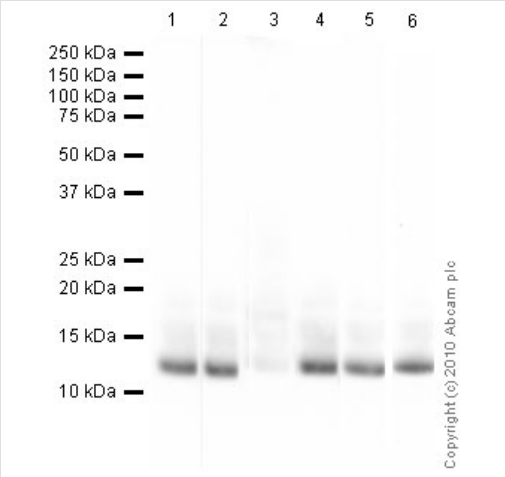


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K8) antibody - ChIP Grade (ab15823)

IHC image of histone H4 (acetyl K8) antibody staining in a section of formalin-fixed paraffin-embedded human breast adenocarcinoma* performed on a Leica BOND^{TM} system using the standard protocol. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab15823, 0.5ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

**Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre*



Western blot - Anti-Histone H4 (acetyl K8) antibody - ChIP Grade (ab15823)

All lanes : Anti-Histone H4 (acetyl K8) antibody - ChIP Grade (ab15823) at 1 µg/ml

Lane 1 : Calf Thymus Histone Preparation Nuclear Lysate (**ab121**)
Lane 2 : Calf Thymus Histone Preparation Nuclear Lysate (**ab121**) with Human Histone H4 peptide (**ab15825**) at 0.5 µg/ml
Lane 3 : Calf Thymus Histone Preparation Nuclear Lysate (**ab121**) with Human Histone H4 (acetyl K8) peptide (**ab15824**) at 0.5 µg/ml
Lane 4 : Calf Thymus Histone Preparation Nuclear Lysate (**ab121**) with Histone H4 peptide - acetyl K5 at 0.5 µg/ml
Lane 5 : Calf Thymus Histone Preparation Nuclear Lysate (**ab121**) with Human Histone H4 (acetyl K12) peptide (**ab15662**) at 0.5 µg/ml
Lane 6 : Calf Thymus Histone Preparation Nuclear Lysate (**ab121**) with Human Histone H2A (acetyl K9) peptide (**ab54016**) at 0.5 µg/ml

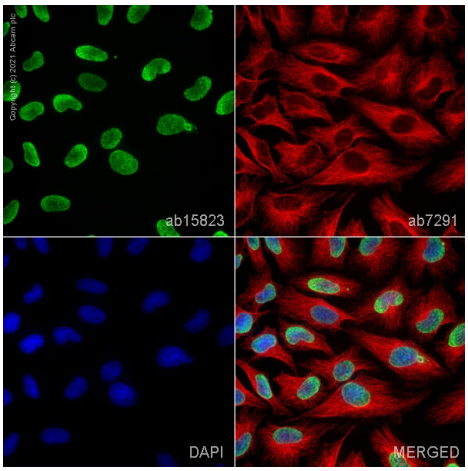
Lysates/proteins at 0.5 µg/ml per lane.

Secondary
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Predicted band size: 11.2 kDa
Observed band size: 13 kDa

Exposure time: 3 minutes

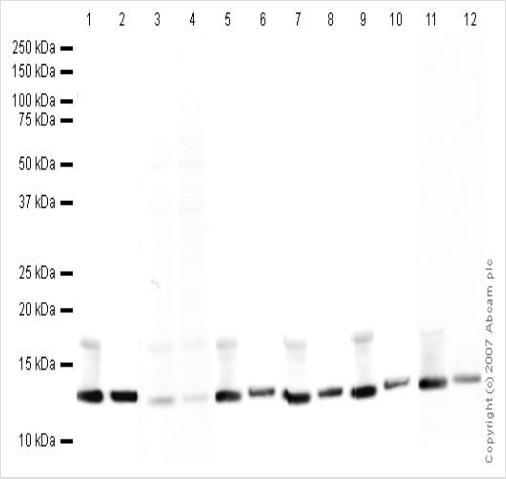


Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K8) antibody - ChIP Grade (ab15823)

ab15823 staining Histone H4 (Acetyl K8) in HeLa cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab15823 at 0.1 µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Also suitable in cells fixed with 4% paraformaldehyde (10 min).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Western blot - Anti-Histone H4 (acetyl K8) antibody - ChIP Grade (ab15823)

All lanes : Anti-Histone H4 (acetyl K8) antibody - ChIP Grade (ab15823) at 1 µg/ml

Lane 1 : Sodium butyrate treated hela histone
Lane 2 : Untreated hela histone
Lane 3 : Sodium butyrate treated hela histone with Human Histone H4 (acetyl K8) peptide (**ab15824**) at 1 µg/ml
Lane 4 : Untreated hela histone with Human Histone H4 (acetyl K8) peptide (**ab15824**) at 1 µg/ml
Lane 5 : Sodium butyrate treated hela histone with Human Histone H4 peptide (**ab15825**) at 1 µg/ml
Lane 6 : Untreated hela histone with Human Histone H4 peptide (**ab15825**) at 1 µg/ml
Lane 7 : Sodium butyrate treated hela histone with Histone H4 peptide - acetyl K5 (**ab15596**) at 1 µg/ml
Lane 8 : Untreated hela histone with Histone H4 peptide - acetyl K5 (**ab15596**) at 1 µg/ml
Lane 9 : Sodium butyrate treated hela histone with Human Histone H4 (acetyl K12) peptide (**ab15662**) at 1 µg/ml
Lane 10 : Untreated hela histone with Human Histone H4 (acetyl K12) peptide (**ab15662**) at 1 µg/ml
Lane 11 : Sodium butyrate treated hela histone with Histone H2A

peptide - acetyl K9 at 1 µg/ml
Lane 12 : Untreated hela histone with Histone H2A peptide - acetyl K9 at 1 µg/ml

Lysates/proteins at 2.5 µg per lane.

Secondary
All lanes : IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/10000 dilution

Performed under reducing conditions.

Predicted band size: 11.2 kDa
Observed band size: 12 kDa
Additional bands at: 22 kDa (possible cross reactivity)

The blot shows that a H4 peptide containing an acetylated K8 residue was able to block recognition of histones by ab15823. Peptides containing other acetylated K residues of H4 and H2A did not block binding of histones by ab15823. This suggests ab15823 specifically recognises Histone H4 acetyl K8.