

Product datasheet

Anti-Histone H4 (di methyl K79) antibody ab2885

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概述

产品名称	Anti-Histone H4 (di methyl K79)抗体
描述	兔多克隆抗体to Histone H4 (di methyl K79)
宿主	Rabbit
特异性	Specific to Histone H4 K79 Di-methyl. In blocking experiments, is not blocked by H3 K79 peptides.
经测试应用	适用于: WB, IHC-P, ICC/IF, ICC
种属反应性	与反应: Cow, Human 不与反应: Saccharomyces cerevisiae
免疫原	Synthetic peptide within Human Histone H4 aa 50 to the C-terminus (di methyl K79) conjugated to Keyhole Limpet Haemocyanin (KLH). The exact sequence is proprietary. (Peptide available as ab4560)
阳性对照	Calf Thymus Histone Preparation; Hela whole cell extract

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	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
纯度	Immunogen affinity purified
克隆	多克隆
同种型	IgG

应用

Our [Abpromise guarantee](#) covers the use of **ab2885** in the following tested applications.

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

应用	Ab评论	说明
WB	★★★★☆	1/500. Detects a band of approximately 14 kDa.
IHC-P		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
ICC/IF		1/200.
ICC		1/200.

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.

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).

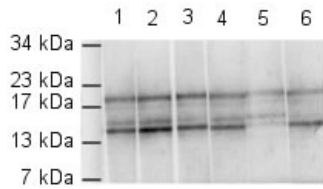
Sumoylated, which is associated with transcriptional repression.

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.

细胞定位

Nucleus. Chromosome.

图片



Western blot - Anti-Histone H4 (di methyl K79) antibody (ab2885)

All lanes : Anti-Histone H4 (di methyl K79) antibody (ab2885) at 1/500 dilution

Lane 1 : Calf Thymus histone prep

Lane 2 : Calf Thymus histone prep with Human Histone H3 (mono methyl K79) peptide (ab4555) at 0.1 µg

Lane 3 : Calf Thymus histone prep with Human Histone H3 (di methyl K79) peptide (ab4556) at 0.1 µg

Lane 4 : Calf Thymus histone prep with Human Histone H3 (tri methyl K79) peptide (ab4557) at 0.1 µg

Lane 5 : Calf Thymus histone prep with Human Histone H4 (di methyl K79) peptide (ab4560) at 0.1 µg

Lane 6 : Calf Thymus histone prep with Human Histone H3 (di methyl K27) peptide (ab1781) at 0.1 µg

Lysates/proteins at 1 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab6721) at 1/2000 dilution

Rabbit polyclonal to Histone H4 Di Methyl K79 at 1/500 on Calf Thymus histone prep (1 µg per lane).

Lane 1: ab2885 1/500

Lane 2: ab2885 1/500 H3 Mono Me K79 peptide (ab4555), 0.1 µg

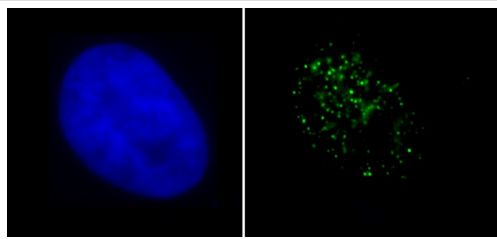
Lane 3: ab2885 1/500 H3 Di Me K79 peptide (ab4556), 0.1 µg

Lane 4: ab2885 1/500 H3 Tri Me K79 peptide (ab4557), 0.1 µg

Lane 5: ab2885 1/500 H4 Di Me K79 peptide (ab4560), 0.1 µg

Lane 6: ab2885 1/500 H3 Di Me K27 peptide (ab1781), 0.1 µg

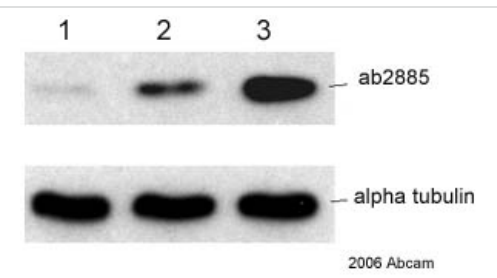
Secondary antibody: Goat anti-rabbit IgG (HRP) ab 1/2000 (ab6721)



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (di methyl K79) antibody (ab2885)

This image is courtesy of Darin McDonal, Hendzel Laboratory

SKN cells were stained with ab2885 (green) at a dilution of 1/200. The cells were fixed in paraformaldehyde for 10 minutes prior to incubation with ab2885. The DNA was stained with DAPI (blue). 100x magnification.



Western blot - Anti-Histone H4 (di methyl K79) antibody (ab2885)

This image is courtesy of an Abreview submitted by Dr Gerald Davies

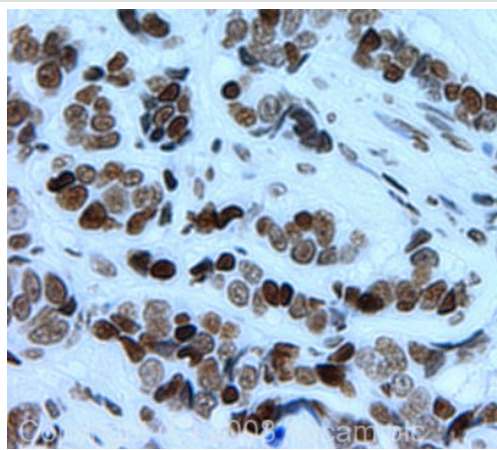
ab2885 at 1/2000 used in Western blot analysis of MCF7 cells (human breast cancer cells).

Lane 1: MCF7 cell lysate control

Lane 2: MCF7 cell lysate (cells treated with 50 μ m Troglitazone for 48 hours)

Lane 3: MCF7 cells lysate (cells treated with 1 μ m Trichostatin for 48 hours)

Troglitazone and trichostatin increase dimethyl H4 (K79) and act as anti-proliferatives in human breast cancer. The blot was stripped and reprobbed with an alpha tubulin antibody to show loading equivalence.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (di methyl K79) antibody (ab2885)

IHC image of Histone H4 (di methyl K79) staining in human breast carcinoma FFPE section, performed on a Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab2885, 5µg/ml, for 8 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.

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