


Anti-Histone H3 (tri methyl K79) antibody ab272163

画像数 4

製品の概要

製品名	Anti-Histone H3 (tri methyl K79) antibody
製品の詳細	Rabbit polyclonal to Histone H3 (tri methyl K79)
由来種	Rabbit
アプリケーション	適用あり: WB, ChIP, ICC/IF, Dot blot
種交差性	交差種: Mouse, Human, Caenorhabditis elegans 交差が予測される動物種: Rat, Chicken, Drosophila melanogaster 
免疫原	Synthetic peptide corresponding to Human Histone H3 (tri methyl K79). Database link: Q71DI3
ポジティブ・コントロール	ICC/IF: HeLa cells ChIP: Chromatin prepared from HeLa cells WB: HeLa and NIH/3T3 histone preps; C.elegans embryo lysate
特記事項	<p>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.</p> <p>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</p>

製品の特性

製品の状態	Liquid
保存方法	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.
バッファー	Preservative: 0.01% Sodium azide Constituents: 0.42% Potassium phosphate, 0.87% Sodium chloride, 30% Glycerol (glycerin, glycerine)
精製度	Immunogen affinity purified
ポリ/モノ	ポリクローナル
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee Abpromise保証は、 次のテスト済みアプリケーションにおけるab272163の使用に適用されます
アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
WB		Use a concentration of 1 µg/ml. Predicted molecular weight: 15 kDa.
ChIP		Use 2-5µg for 10 ⁶ cells.
ICC/IF		1/100 - 1/1000.
Dot blot		1/1000.

ターゲット情報

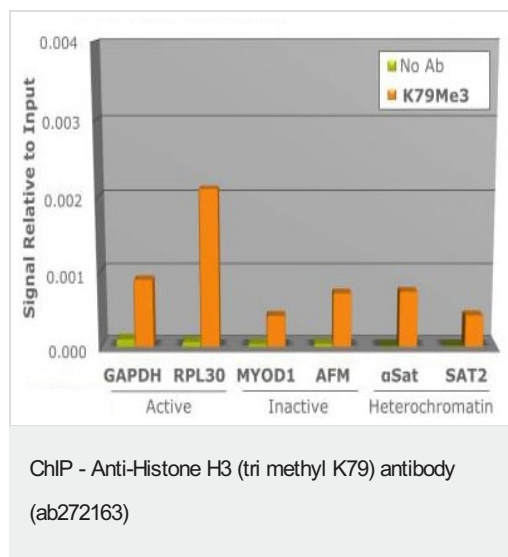
機能	Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling.
配列類似性	Belongs to the histone H3 family.
発生段階	Expressed during S phase, then expression strongly decreases as cell division slows down during the process of differentiation.
翻訳後修飾	<p>Acetylation is generally linked to gene activation. Acetylation on Lys-10 (H3K9ac) impairs methylation at Arg-9 (H3R8me2s). Acetylation on Lys-19 (H3K18ac) and Lys-24 (H3K24ac) favors methylation at Arg-18 (H3R17me).</p> <p>Citrullination at Arg-9 (H3R8ci) and/or Arg-18 (H3R17ci) by PAD4 impairs methylation and represses transcription.</p> <p>Asymmetric dimethylation at Arg-18 (H3R17me2a) by CARM1 is linked to gene activation. Symmetric dimethylation at Arg-9 (H3R8me2s) by PRMT5 is linked to gene repression. Asymmetric dimethylation at Arg-3 (H3R2me2a) by PRMT6 is linked to gene repression and is mutually exclusive with H3 Lys-5 methylation (H3K4me2 and H3K4me3). H3R2me2a is present at the 3' of genes regardless of their transcription state and is enriched on inactive promoters, while it is absent on active promoters.</p> <p>Methylation at Lys-5 (H3K4me), Lys-37 (H3K36me) and Lys-80 (H3K79me) are linked to gene activation. Methylation at Lys-5 (H3K4me) facilitates subsequent acetylation of H3 and H4. Methylation at Lys-80 (H3K79me) is associated with DNA double-strand break (DSB) responses and is a specific target for TP53BP1. Methylation at Lys-10 (H3K9me) and Lys-28 (H3K27me) are linked to gene repression. Methylation at Lys-10 (H3K9me) is a specific target for HP1 proteins (CBX1, CBX3 and CBX5) and prevents subsequent phosphorylation at Ser-11 (H3S10ph) and acetylation of H3 and H4. Methylation at Lys-5 (H3K4me) and Lys-80 (H3K79me) require preliminary monoubiquitination of H2B at 'Lys-120'. Methylation at Lys-10 (H3K9me) and Lys-28 (H3K27me) are enriched in inactive X chromosome chromatin.</p> <p>Phosphorylated at Thr-4 (H3T3ph) by GSG2/haspin during prophase and dephosphorylated during anaphase. Phosphorylation at Ser-11 (H3S10ph) by AURKB is crucial for chromosome condensation and cell-cycle progression during mitosis and meiosis. In addition phosphorylation at Ser-11 (H3S10ph) by RPS6KA4 and RPS6KA5 is important during interphase because it</p>

enables the transcription of genes following external stimulation, like mitogens, stress, growth factors or UV irradiation and result in the activation of genes, such as c-fos and c-jun. Phosphorylation at Ser-11 (H3S10ph), which is linked to gene activation, prevents methylation at Lys-10 (H3K9me) but facilitates acetylation of H3 and H4. Phosphorylation at Ser-11 (H3S10ph) by AURKB mediates the dissociation of HP1 proteins (CBX1, CBX3 and CBX5) from heterochromatin. Phosphorylation at Ser-11 (H3S10ph) is also an essential regulatory mechanism for neoplastic cell transformation. Phosphorylated at Ser-29 (H3S28ph) by MLTK isoform 1, RPS6KA5 or AURKB during mitosis or upon ultraviolet B irradiation. Phosphorylation at Thr-7 (H3T6ph) by PRKCBB is a specific tag for epigenetic transcriptional activation that prevents demethylation of Lys-5 (H3K4me) by LSD1/KDM1A. At centromeres, specifically phosphorylated at Thr-12 (H3T11ph) from prophase to early anaphase, by DAPK3 and PKN1. Phosphorylation at Thr-12 (H3T11ph) by PKN1 is a specific tag for epigenetic transcriptional activation that promotes demethylation of Lys-10 (H3K9me) by KDM4C/JMJD2C. Phosphorylation at Tyr-42 (H3Y41ph) by JAK2 promotes exclusion of CBX5 (HP1 alpha) from chromatin. Monoubiquitinated by RAG1 in lymphoid cells, monoubiquitination is required for V(D)J recombination (By similarity). 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.

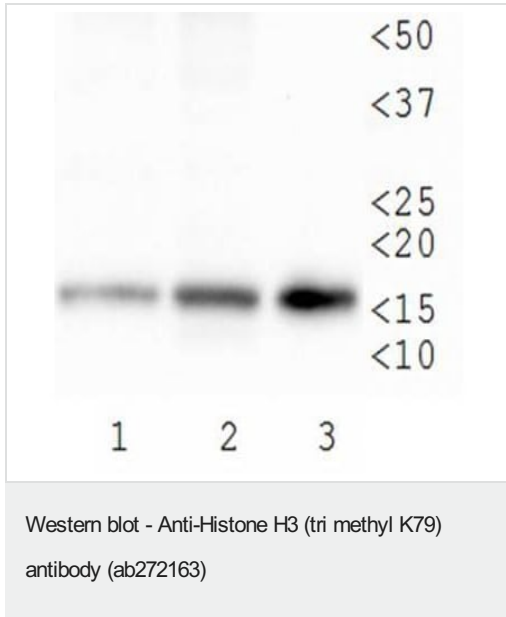
細胞内局在

Nucleus. Chromosome.

画像



Chromatin Immunoprecipitation using ab272163. Chromatin from one million formaldehyde cross-linked HeLa cells was used with 2 µg of ab272163 and 20 µl of magnetic IgG beads per immunoprecipitation. A "no antibody" (No Ab) control was also used. Immunoprecipitated DNA was quantified using quantitative real-time PCR and SYBR green dye, then normalized to the non-precipitated input chromatin, which is equal to one.



All lanes : Anti-Histone H3 (tri methyl K79) antibody (ab272163) at 1 µg/ml

Lane 1 : HeLa human epithelial cell line from cervix adenocarcinoma) histone prep

Lane 2 : NIH/3T3 (mouse embryo fibroblast cell line) histone prep

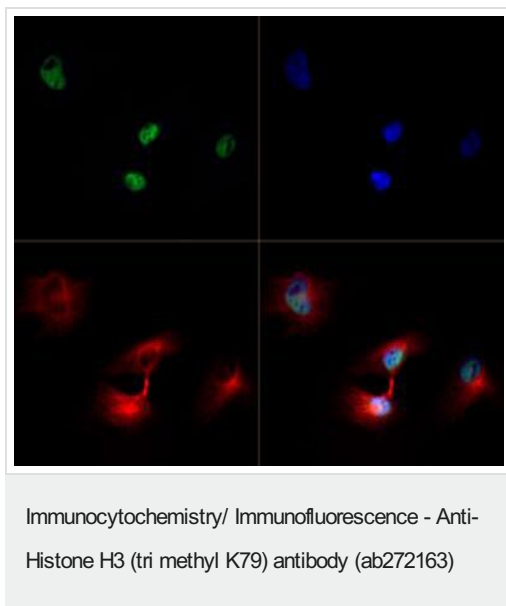
Lane 3 : C.elegans embryo lysate

Lysates/proteins at 30 µg per lane.

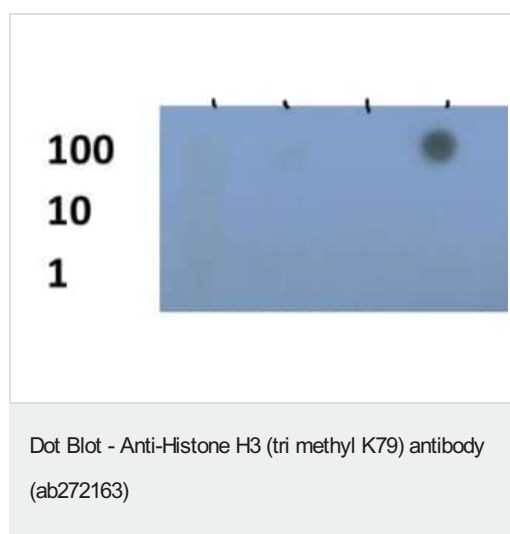
Secondary

All lanes : IRDye800™ rabbit secondary antibody at 1/10000 dilution

Predicted band size: 15 kDa



Immunofluorescence analysis of 0.5% PFA-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells during prophase labeling Histone H3 (tri methyl K79) with ab272163 at 1/100 dilution for 1 hour at room temperature, followed by a Dylight 488 secondary antibody at 1/10000 for 45 minutes at room temperature. Histone H3 (tri methyl K79) is green. Nuclei and alpha-tubulin are counterstained with DAPI (blue) and Dylight 550 (red).



Dot Blot of ab272163.

Lane 1: K79 unmodified.

Lane 2: K79me1.

Lane 3: K79me2.

Lane 4: K79me3.

Load: 1, 10, and 100 picomoles of peptide. Primary antibody ab272163 was used at 1/1000 for 45 minutes at 4°C. Followed by the secondary antibody Dylight™488 rabbit at 1/10000 for 45 minutes at room temperature.

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