


Anti-Histone H4 (tri methyl K20) antibody ab227884

7 Images

Overview

Product name	Anti-Histone H4 (tri methyl K20) antibody
Description	Rabbit polyclonal to Histone H4 (tri methyl K20)
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, Dot blot, ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Xenopus laevis 
Immunogen	Synthetic peptide within Human Histone H4 (N terminal) (tri methyl K20). The exact sequence is proprietary. Conjugated to a carrier protein. Database link: P62805
Positive control	WB: HeLa whole cell and nuclear lysates. IHC-P: Mouse duodenum, liver and muscle tissues; Rat fore brain tissue. ICC/IF: HeLa cells.
General notes	<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>

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: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 78.99% PBS, 1% BSA, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab227884 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		1/500 - 1/3000. Predicted molecular weight: 11 kDa.
IHC-P		1/100 - 1/1000.
Dot blot		1/5000.
ICC/IF		1/100 - 1/1000.

Target

Function 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.

Sequence similarities Belongs to the histone H4 family.

Post-translational modifications 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.

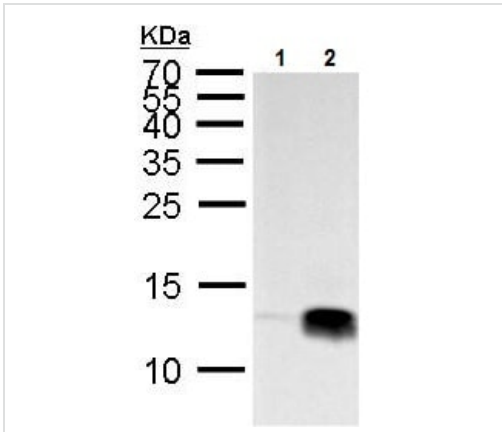
Ubiquitinated by the CUL4-DDB-RBX1 complex in response to ultraviolet irradiation. This may weaken the interaction between histones and DNA and facilitate DNA accessibility to repair proteins. Monoubiquitinated at Lys-92 of histone H4 (H4K91ub1) in response to DNA damage.

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.

Cellular localization Nucleus. Chromosome.

Images



Western blot - Anti-Histone H4 (tri methyl K20) antibody (ab227884)

All lanes : Anti-Histone H4 (tri methyl K20) antibody (ab227884) at 1/2000 dilution

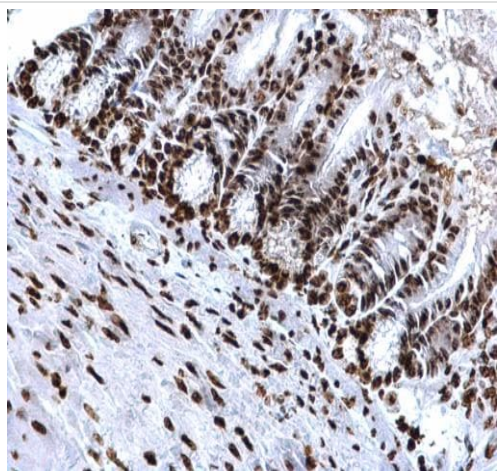
Lane 1 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lane 2 : HeLa (human epithelial cell line from cervix adenocarcinoma) nuclear lysate

Lysates/proteins at 30 µg per lane.

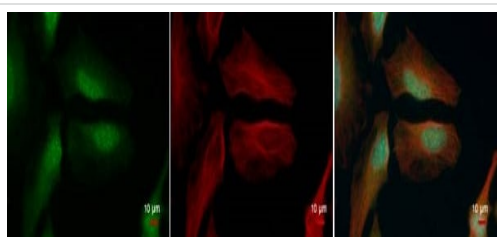
Predicted band size: 11 kDa

15 % SDS-PAGE gel.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (tri methyl K20) antibody (ab227884)

Paraffin-embedded mouse duodenum tissue stained for Histone H4 (tri methyl K20) using ab227884 at 1/500 dilution in immunohistochemical analysis.

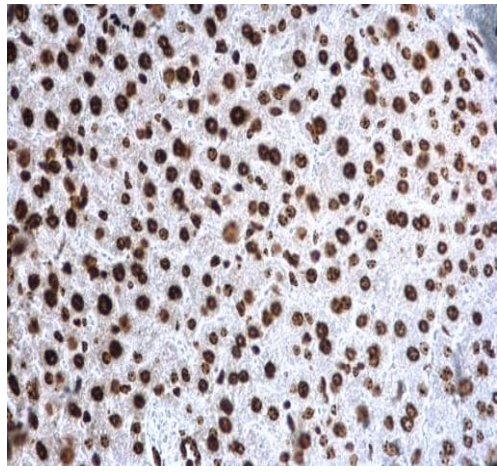


Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (tri methyl K20) antibody (ab227884)

HeLa (human epithelial cell line from cervix adenocarcinoma) cells stained for Histone H4 (tri methyl K20) (green) using ab227884 at 1/500 dilution in ICC/IF. Cells were fixed in 4% paraformaldehyde at RT for 15 minutes.

Red: alpha Tubulin stained with an alpha Tubulin antibody at 1/500 dilution..

Blue: Hoechst 33342 staining.



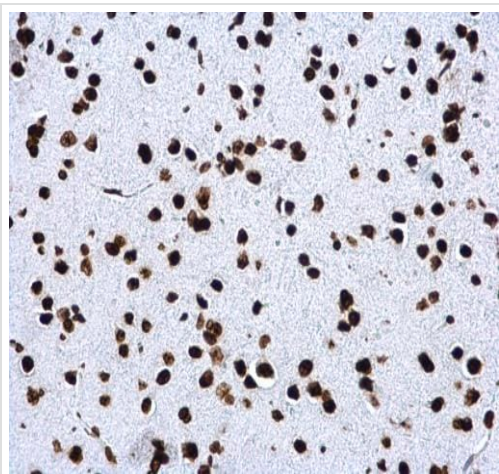
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (tri methyl K20) antibody (ab227884)

Paraffin-embedded mouse liver tissue stained for Histone H4 (tri methyl K20) using ab227884 at 1/500 dilution in immunohistochemical analysis.



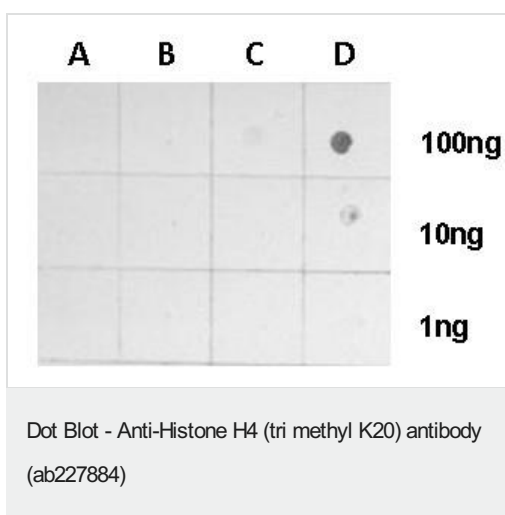
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (tri methyl K20) antibody (ab227884)

Paraffin-embedded mouse muscle tissue stained for Histone H4 (tri methyl K20) using ab227884 at 1/500 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (tri methyl K20) antibody (ab227884)

Paraffin-embedded rat fore brain tissue stained for Histone H4 (tri methyl K20) using ab227884 at 1/500 dilution in immunohistochemical analysis.



Dot Blot - Anti-Histone H4 (tri methyl K20) antibody (ab227884)

Dot Blot analysis of anti-Histone H4 (tri methyl Lys20) antibody with peptide samples.

Varied amount of peptide samples were spotted onto positively charged nylon membrane and blotted with ab227884 at 1/5000 dilution.

- A: Peptide samples of H4K20 un
- B: Peptide samples of H4K20me1
- C: Peptide samples of H4K20me2
- D: Peptide samples of H4K20me3

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