


Product datasheet

Anti-Histone H4 (acetyl K20) antibody [RM205] ab214655

Recombinant

[4 Images](#)

Overview

Product name	Anti-Histone H4 (acetyl K20) antibody [RM205]
Description	Rabbit monoclonal [RM205] to Histone H4 (acetyl K20)
Host species	Rabbit
Specificity	ab214655 reacts to Histone H4 acetylated at Lysine 20. No cross reactivity with other acetylated Lysines in Histone H4.
Tested applications	Suitable for: WB, ICC/IF, ELISA
Species reactivity	Reacts with: Human, Recombinant fragment Predicted to work with: a wide range of other species 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	Acid extracts of HeLa cells.

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	Preservative: 0.09% Sodium azide Constituents: 48% PBS, 50% Glycerol (glycerin, glycerine), 1% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	RM205
Isotype	IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab214655 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		Use a concentration of 1 - 2 µg/ml.
ICC/IF		Use at an assay dependent concentration.
ELISA		Use at an assay dependent concentration.

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 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.

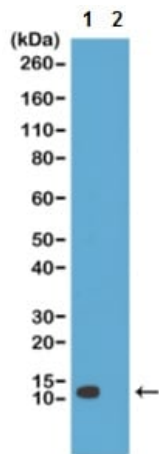
The exact role of H4K91ub1 in DNA damage response is still unclear but it may function as a licensing signal for additional histone H4 post-translational modifications such as H4 Lys-21 methylation (H4K20me).

Sumoylated, which is associated with transcriptional repression.

Cellular localization

Nucleus. Chromosome.

Images

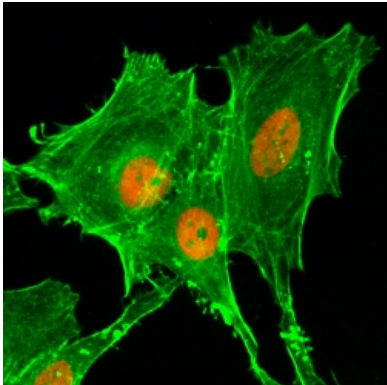


Western blot - Anti-Histone H4 (acetyl K20) antibody [RM205] (ab214655)

All lanes : Anti-Histone H4 (acetyl K20) antibody [RM205] (ab214655) at 1 μ g/ml

Lane 1 : acid extracts of HeLa cells

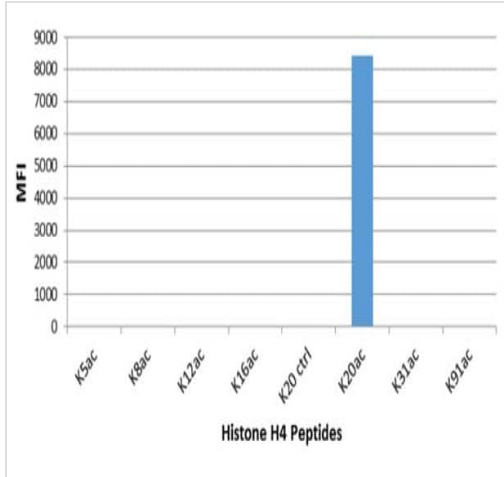
Lane 2 : recombinant Histone H4



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K20) antibody [RM205] (ab214655)

Immunocytochemical analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) labeling Histone H4 (acetyl K20) with ab214655 (red).


Counterstained actin with fluorescein phalloidin (green).



ab214655 specifically reacts to Histone H4 acetylated at Lysine 20 (K20ac). No cross reactivity with unmodified Lysine 20 (K20 ctrl), acetylated Lysine 5 (K5ac), Lysine 8 (K8ac), Lysine 12 (K12ac), Lysine 16 (K20ac), Lysine 31 (K31ac), or Lysine 91 (K91) in Histone H4.

ELISA - Anti-Histone H4 (acetyl K20) antibody
[RM205] (ab214655)

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

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(ab214655)

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