

Product datasheet

Anti-Histone H4 (phospho S1) antibody [RM194] ab222769

Recombinant

[2 Images](#)

Overview

Product name	Anti-Histone H4 (phospho S1) antibody [RM194]
Description	Rabbit monoclonal [RM194] to Histone H4 (phospho S1)
Host species	Rabbit
Specificity	ab222769 reacts to Histone H4 phosphorylated at Serine 1. The reactivity is not affected by neighboring Arginine 3 modifications. No cross reactivity with Histone H2A phosphorylated at Serine 1.
Tested applications	Suitable for: WB, ICC/IF
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide corresponding to Histone H4 (phospho S1).
Positive control	WB: HeLa whole cell lysate. ICC/IF: 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: 50% Glycerol, PBS, 1% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	RM194
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab222769** 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 0.5 - 2 µg/ml.
ICC/IF		Use a concentration of 1 - 2 µg/ml. Fixation/Permeabilization: PFA/Triton X-100

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).

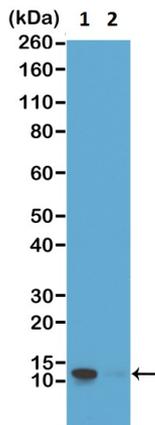
Monomethylation is performed by SET8. Trimethylation is performed by SUV420H1 and SUV420H2 and induces gene silencing.

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

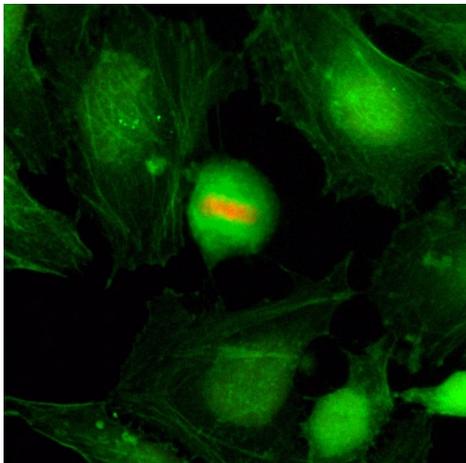


Western blot - Anti-Histone H4 (phospho S1) antibody [RM194] (ab222769)

All lanes : Anti-Histone H4 (phospho S1) antibody [RM194] (ab222769) at 0.5 µg/ml

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

Lane 2 : Recombinant Histone H4



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (phospho S1) antibody [RM194] (ab222769)

HeLa (human epithelial cell line from cervix adenocarcinoma) cells stained for Histone H4 (red) using ab222769 (2 µg/mL) in ICC/IF.

Actin filaments were labeled with fluorescein phalloidin (green).

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