

Product datasheet

Anti-Histone H2A (ubiquityl K119) antibody [EPR19800] ab193203

Recombinant RabMAb

6 Images

Overview

Product name	Anti-Histone H2A (ubiquityl K119) antibody [EPR19800]
Description	Rabbit monoclonal [EPR19800] to Histone H2A (ubiquityl K119)
Host species	Rabbit
Tested applications	Suitable for: WB, ICC/IF, PepArr
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa, NIH/3T3 and C6 whole cell lysates. ICC/IF: HeLa and NIH/3T3 cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</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	<p>pH: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 0.05% BSA, 49% Glycerol (glycerin, glycerine), PBS</p>
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR19800
Isotype	IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab193203 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		1/1000. Detects a band of approximately 22 kDa (predicted molecular weight: 22 kDa).
ICC/IF		1/500.
PepArr		Use a concentration of 0.1 µg/ml.

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 H2A family.

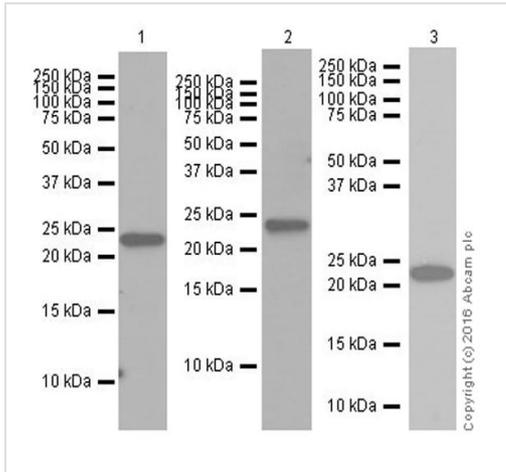
Post-translational modifications

The chromatin-associated form is phosphorylated on Thr-121 during mitosis. Deiminated on Arg-4 in granulocytes upon calcium entry. Monoubiquitination of Lys-120 by RING1 and RNF2/RING2 complex gives a specific tag for epigenetic transcriptional repression and participates in X chromosome inactivation of female mammals. It is involved in the initiation of both imprinted and random X inactivation. Ubiquitinated H2A is enriched in inactive X chromosome chromatin. Ubiquitination of H2A functions downstream of methylation of 'Lys-27' of histone H3. Monoubiquitination of Lys-120 by RNF2/RING2 can also be induced by ultraviolet and may be involved in DNA repair. Following DNA double-strand breaks (DSBs), it is ubiquitinated through 'Lys-63' linkage of ubiquitin moieties by the E2 ligase UBE2N and the E3 ligases RNF8 and RNF168, leading to the recruitment of repair proteins to sites of DNA damage. Monoubiquitination and ionizing radiation-induced 'Lys-63'-linked ubiquitination are distinct events. Phosphorylation on Ser-2 is enhanced during mitosis. Phosphorylation on Ser-2 by RPS6KA5/MSK1 directly represses transcription. Acetylation of H3 inhibits Ser-2 phosphorylation by RPS6KA5/MSK1. Symmetric dimethylation on Arg-4 by the PRDM1/PRMT5 complex may play a crucial role in the germ-cell lineage.

Cellular localization

Nucleus. Chromosome.

Images



Western blot - Anti-Histone H2A (ubiquityl K119) antibody [EPR19800] (ab193203)

All lanes : Anti-Histone H2A (ubiquityl K119) antibody [EPR19800] (ab193203) at 1/1000 dilution

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

Lane 2 : NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate

Lane 3 : C6 (rat glial tumor cell line) whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

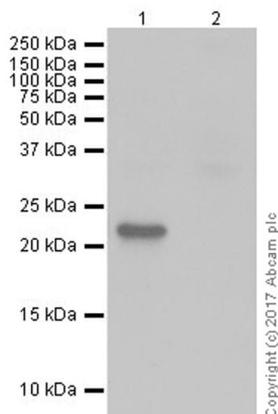
Predicted band size: 22 kDa

Observed band size: 22 kDa

Exposure time : Lane 1:3 minutes; Lane 2:15 seconds; Lane 3: 3 minutes.

Blocking/Dilution buffer: 5% BSA/TBST.

For Lysate preparation protocol, please refer to the protocol book in the protocol section and/or [here\(downloadable copy\)](#).



Western blot - Anti-Histone H2A (ubiquityl K119) antibody [EPR19800] (ab193203)

All lanes : Anti-Histone H2A (ubiquityl K119) antibody [EPR19800] (ab193203) at 1/1000 dilution

All lanes : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 22 kDa

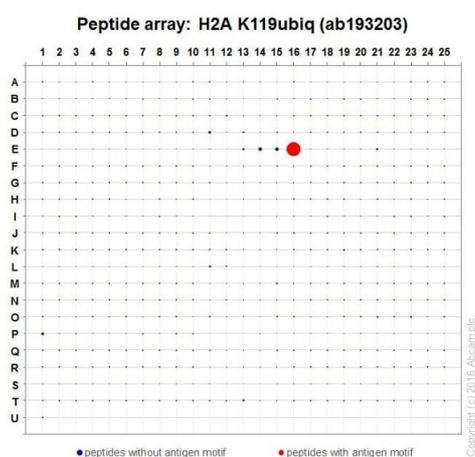
Observed band size: 22 kDa

Exposure time: 10 seconds

Blocking/Dilution buffer: 5% BSA/TBST.

The different result is due to the lysates preparation method. The lysate in lane 1 is prepared by 1%SDS Hot Lysate buffer method. The lysate in lane 2 is prepared by RIPA lysis method. This antibody works in 1%SDS Hot Lysates in WB.

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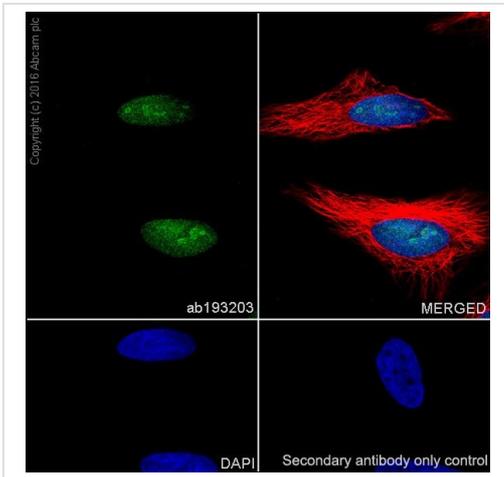


Peptide Array - Anti-Histone H2A (ubiquityl K119) antibody [EPR19800] (ab193203)

ab193203 was tested in Peptide array against 501 different modified and unmodified histone peptides; each peptide is printed on the array at six concentrations (each in triplicate).

Circle area represents affinity between the antibody and a peptide: all antigen-containing peptides are displayed as red circles, all other peptides as blue circles. The affinity is calculated as area under curve when antibody binding values are plotted against the corresponding peptide concentration. Each circle area is normalized to the peptide with the strongest affinity.

The complete dataset, including full list of all peptides and information on the position of each peptide in the diagram, can be downloaded [here](#).

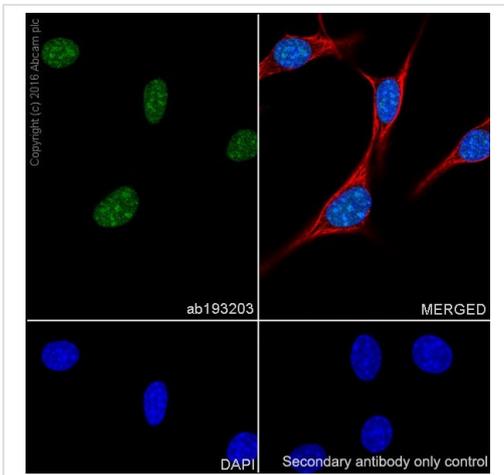


Immunocytochemistry/ Immunofluorescence - Anti-Histone H2A (ubiquityl K119) antibody [EPR19800] (ab193203)

Immunofluorescent analysis of 100% methanol-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Histone H2A (ubiquityl K119) with ab193203 at 1/500 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear staining on HeLa cell line.

The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-Histone H2A (ubiquityl K119) antibody [EPR19800] (ab193203)

Immunofluorescent analysis of 100% methanol-fixed NIH/3T3 (mouse embryo fibroblast cell line) cells labeling Histone H2A (ubiquityl K119) with ab193203 at 1/500 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing nuclear staining on NIH/3T3 cell line.

The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Histone H2A (ubiquityl K119) antibody
[EPR19800] (ab193203)

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