abcam

ab194352

Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free

Recombinant | RabMAb | Advanced Validation

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR1004
Purification technique	Affinity purification Protein A
Specificity	This antibody only detects Histone H4 acetylated on Lysine 16.
Concentration	1.029 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ChIC/CUT&RUN-seq

Tested

Species	Human

Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse
Dilution info	-
Notes	Please check the parent abID, ab109463, for a recommended dilution.

Species	Rat
Dilution info	-
Notes	Please check the parent abID, ab109463, for a recommended dilution.

Species	Human
Dilution info	-

Notes	Please check the parent abID, ab109463, for a recommended dilution.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information H4C1 acK16

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.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab194352 is the carrier-free version of ab109463.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

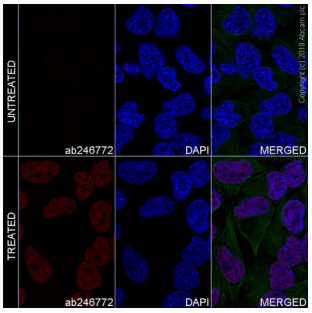
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

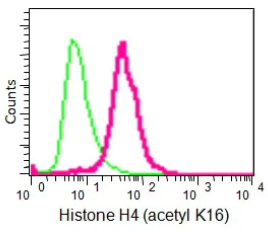
15 product images



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H4 (acetyl K16) antibody

Clone EPR1004 (ab194352) has been successfully conjugated by Abcam. This image was generated using Anti-Histone H4 (acetyl K16) antibody [EPR1004] (Alexa Fluor® 647). Please refer to ab246772 for protocol details.
ab246772 staining Histone H4 (acetyl K16) in HeLa +/- TSA (500 ng/ml for 4h). The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab246772 at 1/200 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).

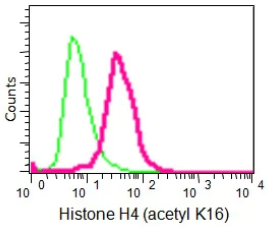


Flow Cytometry (Intracellular) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Flow Cytometry (Intracellular) staining using rabbit Anti-Histone H4 (acetyl K16) antibody

Intracellular Flow Cytometry analysis of HeLa cells labelling Histone H4 (acetyl K16) with unpurified ab109463 (red) at 1/130. Cells were fixed with 80% methanol. A FITC-conjugated goat

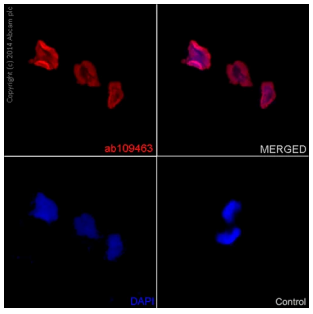
anti-rabbit IgG was used as the secondary antibody (1/150). A rabbit monoclonal IgG was used as the isotype control (green).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).



Flow Cytometry (Intracellular) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Flow Cytometry (Intracellular) staining using rabbit Anti-Histone H4 (acetyl K16) antibody

Intracellular Flow Cytometry analysis of HeLa cells labelling Histone H4 (acetyl K16) with purified ab109463 (red) at 1/200. Cells were fixed with 80% methanol. A FITC-conjugated goat anti-rabbit IgG was used as the secondary antibody (1/150). A rabbit monoclonal IgG was used as the isotype control (green).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).

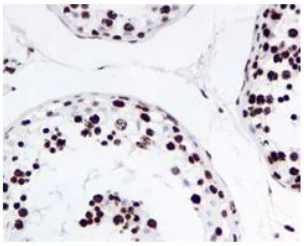


Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H4 (acetyl K16) antibody

Immunocytochemistry/Immunofluorescence analysis of HeLa cells treated with TSA labelling Histone H4 (acetyl K16) with unpurified ab109463 (red) at 1/100. Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 555-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.
Control: primary antibody (1/100) and secondary antibody ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).

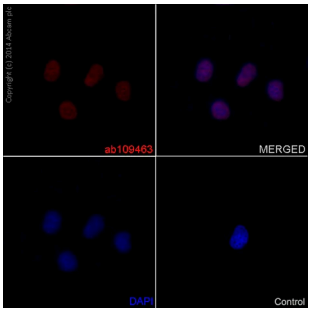


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H4 (acetyl K16) antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human testis tissue labelling Histone H4 with unpurified ab109463 at 1/100.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

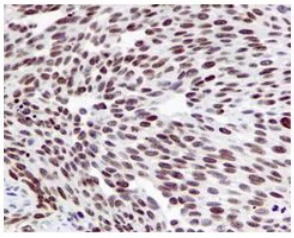


Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H4 (acetyl K16) antibody

Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling Histone H4 (acetyl K16) with unpurified ab109463 (red) at 1/100. Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 555-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.
Control: primary antibody (1/100) and secondary antibody ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).

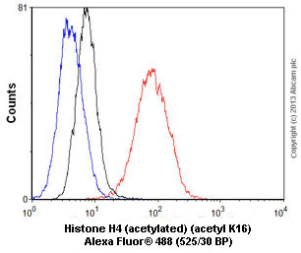


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H4 (acetyl K16) antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human transitional cell carcinoma labelling Histone H4 (acetly K16) with unpurified ab109463 at 1/100. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).

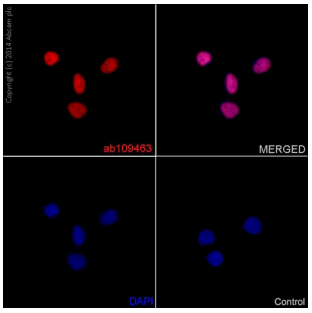
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Flow Cytometry (Intracellular) staining using rabbit Anti-Histone H4 (acetyl K16) antibody

Overlay histogram showing HeLa cells stained with unpurified ab109463 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab109463, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluorr® 488 goat anti-rabbit IgG (H+L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).

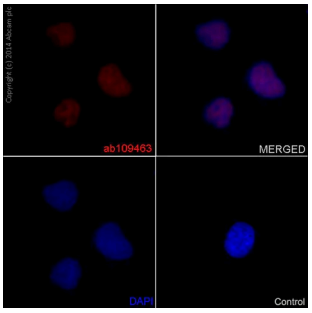


Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H4 (acetyl K16) antibody

Immunocytochemistry/Immunofluorescence analysis of HeLa cells treated with TSA labelling Histone H4 (acetyl K16) with purified ab109463 (red) at 1/150. Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 555-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.
Control: primary antibody (1/150) and secondary antibody ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).

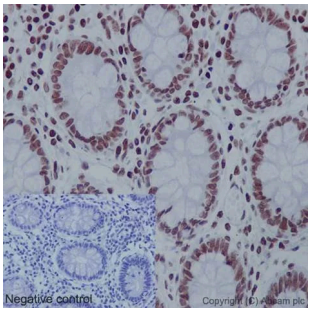


Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H4 (acetyl K16) antibody

Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling Histone H4 (acetyl K16) with purified ab109463 (red) at 1/150. Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 555-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.
Control: primary antibody (1/150) and secondary antibody ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).

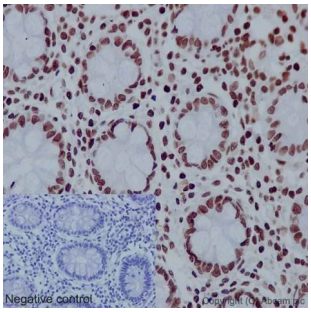
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H4 (acetyl K16) antibody

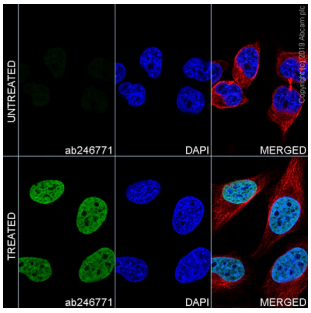
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon tissue labelling Histone H4 (acetyl K16) with unpurified ab109463 at 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H4 (acetyl K16) antibody

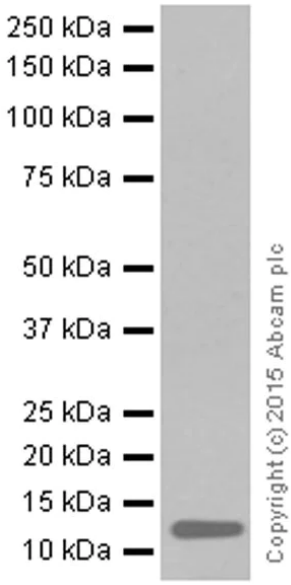
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon tissue labelling Histone H4 (acetyl K16) with purified ab109463 at 1/150. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H4 (acetyl K16) antibody

Clone EPR1004 (ab194352) has been successfully conjugated by Abcam. This image was generated using Anti-Histone H4 (acetyl K16) antibody [EPR1004] (Alexa Fluor® 488). Please refer to ab246771 for protocol details.
ab246771 staining Histone H4 (acetyl K16) in HeLa +/- Trichostatin A (500 ng/ml for 4h). The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab246771 at 1/200 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).



Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

Histone H4 (acetyl K16) Western blot staining of HeLa (human cervix adenocarcinoma) treated with Trichostatin A whole cell lysate using rabbit Anti-Histone H4 (acetyl K16) antibody

Blocking buffer and concentration: 5% NFDM/TBST
Diluting buffer and concentration: 5% NFDM/TBST

All lanes:
Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

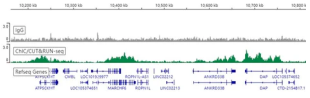
All lanes:
HeLa (human cervix adenocarcinoma) treated with Trichostatin A whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051)

Predicted band size: 11 kDa

Exposure time: 10s



ChIC/CUT&RUN sequencing - Anti-Histone H4 (acetyl K16) antibody [EPR1004] - BSA and Azide free (ab194352)

ChIC/CUT&RUN was performed using a pAG-MNAse at a final concentration of 700 ng/mL, 2.5 x 10^5 HeLa (Human cervix adenocarcinoma epithelial cell line) cells and 2 µg of ab109463 [EPR1004]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control ab172730 is also shown. Additional screenshots of mapped reads can be found in the Protocol booklet in the Product Protocol section. The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab109463).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.