abcam

ab109463

Anti-Histone H4 (acetyl K16) antibody [EPR1004]

Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463) is a rabbit monoclonal antibody detecting Histone H4 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 80 publications

Recombinant | RabMAb | Advanced Validation | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR1004
Purification technique	Affinity purification Protein A
Specificity	This antibody only detects Histone H4 acetylated on Lysine 16.
Concentration	1.185 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	2 µg
Notes	-

Expected

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

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000 - 1/2000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/2000
Notes	-

Species	Human
Dilution info	1/1000 - 1/2000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/200
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100 - 1/200
Notes	ab172730 - 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	1/100 - 1/200
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	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Stable for 12 months at -20°C

Notes

What is this antibody validated in?
Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of Histone H4?
Anti-Histone H4 (acetyl K16) [EPR1004] (ab109463) specifically detects a band for Histone H4 (UniProt: P62805) at a molecular weight of 11kDa.

Trusted by the scientific community
Anti-Histone H4 (acetyl K16) [EPR1004] (ab109463) was first used in a scientific publication in 2011 and has been cited over 80 times in peer-reviewed journals.

Reviewed by scientists
Anti-Histone H4 (acetyl K16) [EPR1004] (ab109463) has over 10 independent reviews from customers.

Other related products
We have a range of other formats of antibody clone [EPR1004] also available for your convenience: ab109463, Carrier free - ab194352, HRP - ab200859, Alexa Fluor® 488 - ab246771, Alexa Fluor® 647 - ab246772

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.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

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

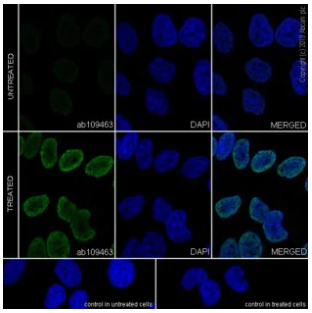
We do not recommend this combination. It is not covered by our product promise.

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:

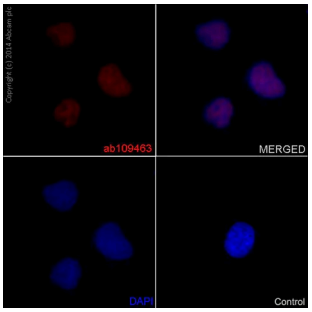
22 product images



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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

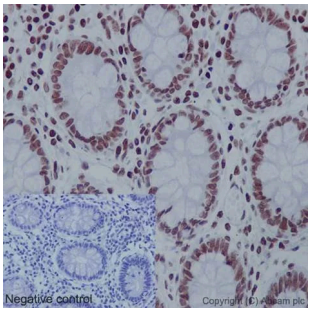
Immunocytochemistry/ Immunofluorescence analysis of untreated HeLa cells (top row) and HeLa+ TSA(500ng/ml, 4h) cells (middle row) labeling Histone H4 (acetyl K16) with ab109463 at 1/500. Goat anti rabbit IgG(Alexa Fluor® 488); ab150077 at 1/1000 dilution was used as the secondary antibody. Cells were fixed with 4% paraformaldehyde and permeabilised with 0.1% tritonX-100. DAPI (blue) was used as a nuclear counterstain.



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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

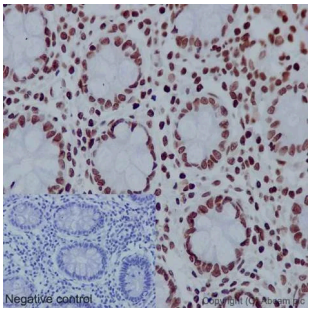
Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling Histone H4 (acetyl K16) with purified ab109463 (red) at 1/150. Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 555-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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

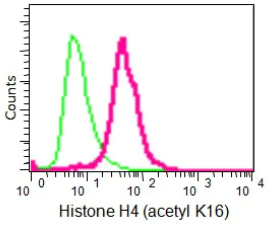
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon tissue labelling Histone H4 (acetyl K16) with unpurified ab109463 at 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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

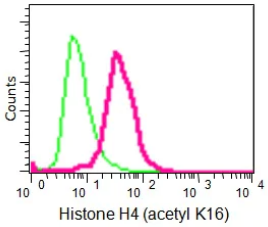
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon tissue labelling Histone H4 (acetyl K16) with purified ab109463 at 1/150. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Flow Cytometry (Intracellular) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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

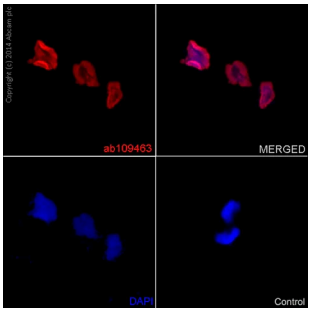
Intracellular Flow Cytometry analysis of HeLa cells labelling Histone H4 (acetyl K16)with unpurified ab109463 (red) at 1/130. Cells were fixed with 80% methanol. A FITC-conjugated goat anti-rabbit IgG was used as the secondary antibody (1/150). A rabbit monoclonal IgG was used as the isotype control (green).



Flow Cytometry (Intracellular) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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

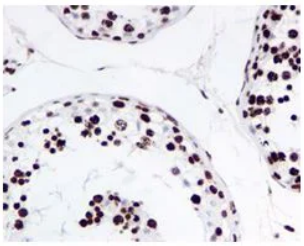
Intracellular Flow Cytometry analysis of HeLa cells labelling Histone H4 (acetyl K16) with purified ab109463 (red) at 1/200. Cells were fixed with 80% methanol. A FITC-conjugated goat anti-rabbit IgG was used as the secondary antibody (1/150). A rabbit monoclonal IgG was used as the isotype control (green).



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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

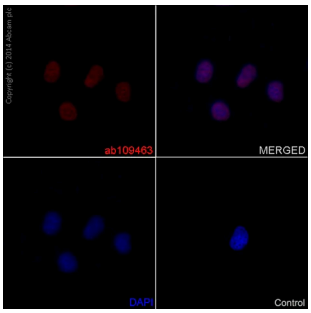
Immunocytochemistry/Immunofluorescence analysis of HeLa cells treated with TSA labelling Histone H4 (acetyl K16) with unpurified ab109463 (red) at 1/100. Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 555-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue)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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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

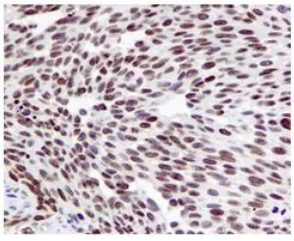
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human testis tissue labelling Histone H4 with unpurified ab109463 at 1/100.
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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

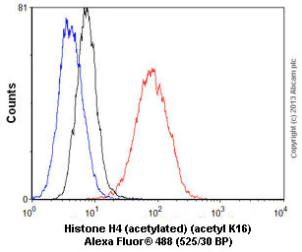
Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling Histone H4 (acetyl K16) with unpurified ab109463 (red) at 1/100. Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 555-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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

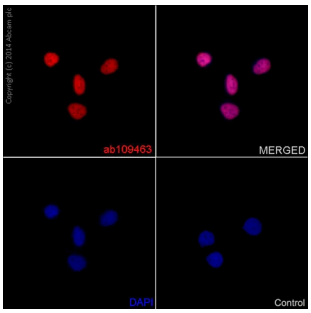


Flow Cytometry (Intracellular) - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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)

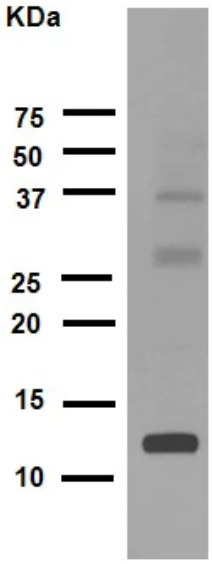
was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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).



Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

Histone H4 (acetyl K16) Western blot staining of HeLa cell lysate - treated with TSA 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] (ab109463) at 1/1500 dilution

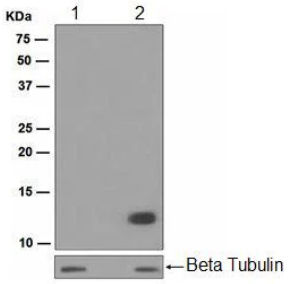
All lanes:
HeLa cell lysate - treated with TSA at 10 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 11 kDa

Observed band size: 11 kDa



Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

All lanes:
Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463) at 1/1000 dilution

Lane 1:
HeLa cell lysates, untreated at 10 µg

Lane 2:
HeLa cell lysates treated with TSA at 10 µg

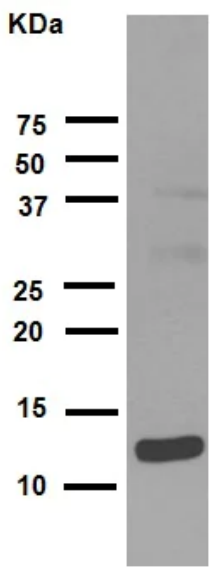
Secondary

All lanes:

HRP-labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 11 kDa

Observed band size: 11 kDa



Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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] (ab109463) at 1/1000 dilution

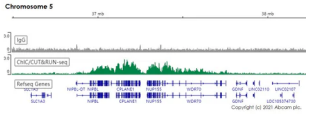
All lanes:
HeLa cell lysate - treated with TSA at 10 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

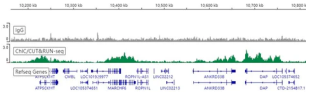
Predicted band size: 11 kDa

Observed band size: 11 kDa



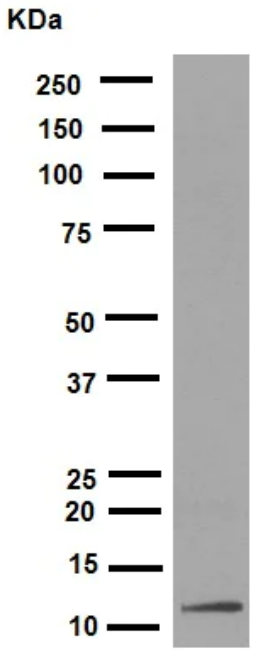
ChIC/CUT&RUN sequencing - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

CUT&RUN was performed using a ChIC/CUT&RUN pAG-MNAse, 10^5 HeLa cells, and 2µg of ab109463 [EPR1004]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads.
Additional screenshots of mapped reads can be downloaded here.



ChIC/CUT&RUN sequencing - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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.



Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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] (ab109463) at 1/1000 dilution

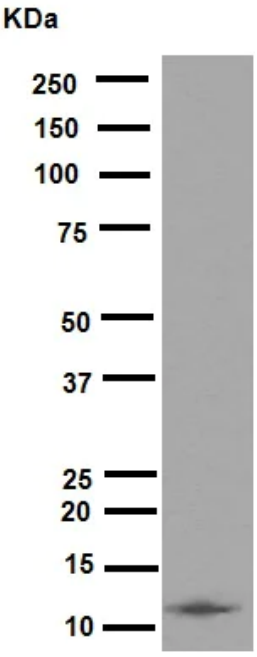
All lanes:
Mouse spleen tissue lysate at 10 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L)

Predicted band size: 11 kDa

Observed band size: 11 kDa



Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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] (ab109463) at 1/1500 dilution

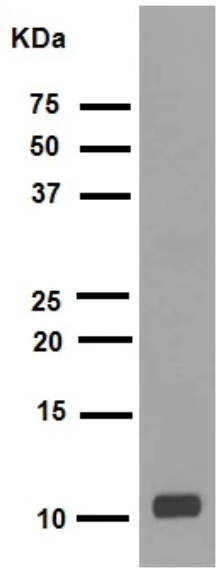
All lanes:
Mouse spleen tissue lysate at 10 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 11 kDa

Observed band size: 11 kDa



Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

Histone H4 (acetyl K16) Western blot staining of C6 cell lysate - treated with TSA 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] (ab109463) at 1/1500 dilution

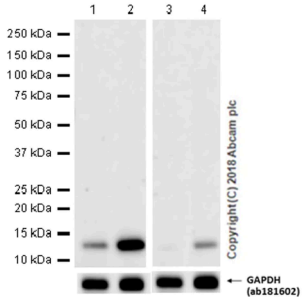
All lanes:
C6 cell lysate - treated with TSA at 10 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 11 kDa

Observed band size: 11 kDa



Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

Blocking/Diluting buffer and concentration 5% NFDM/TBST
Lanes 1 - 2:
Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463) at 1/6000 dilution

Lanes 3 - 4:
Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463) at 1/24000 dilution

Lanes 1 and 3:
Untreated C6 (Rat glial tumor glial cell) whole cell lysate at 20 µg

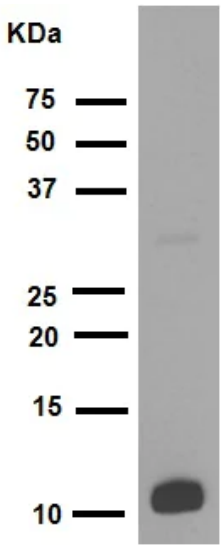
Lanes 2 and 4:
C6 (Rat glial tumor glial cell) treated with Trichostatin A (final concentration is 500ng/ml) for 4 hours whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 11 kDa

Exposure time: 3min



Western blot - Anti-Histone H4 (acetyl K16) antibody [EPR1004] (ab109463)

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] (ab109463) at 1/1000 dilution

All lanes:
C6 cell lysate - treated with TSA at 10 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 11 kDa

Observed band size: 11 kDa

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