abcam

ab45166

Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade

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), 0.17% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EP1002Y
Purification technique	Affinity purification Protein A
Specificity	This antibody has weak cross-reactivity with H4K5me3 and H4K20ac in peptide array. Further optimization may be needed to minimize the cross-reactivity in assays similar to peptide array.
Concentration	0.702 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human

Dilution info	1/20 - 1/50
Notes	-

Expected

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

ChIP

Tested

Species	Human
Dilution info	2 µg for 25 µg chromatin
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	1/5000 - 1/10000
Notes	-

Species	Mouse
Dilution info	1/5000 - 1/10000
Notes	-

Species	Rat
Dilution info	1/5000 - 1/10000

Notes	-

ICC/IF

Tested

Species	Rat
Dilution info	1/150 - 1/500
Notes	-

Expected

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

ChIP-seq

Tested

Species	Human
Dilution info	4 µg for 10^7 Cells
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/250 - 1/2500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/250 - 1/2500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/250 - 1/2500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information H4C1 acK8

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	Avoid freeze / thaw cycle

Notes

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.

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

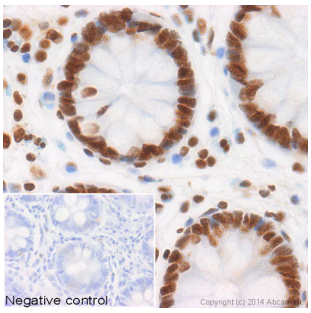
We do not recommend this combination. It is not covered by our product promise.

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.

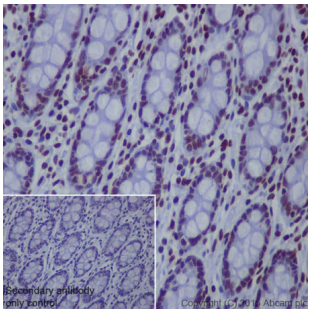
12 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

Histone H4 (acetyl K8) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H4 (acetyl K8) antibody

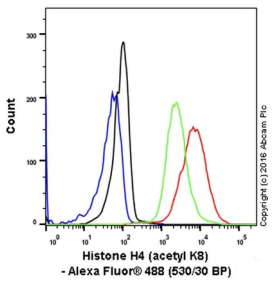
Immunohistochemical analysis of formalin fixed paraffin embedded human colon tissue sections labelling Histone H4 (acetyl K8) with unpurified ab45166 at dilution of 1/200.
For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

Histone H4 (acetyl K8) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H4 (acetyl K8) antibody

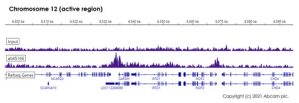
Immunohistochemical staining of paraffin-embedded human colon sections labelling Histone H4 (acetyl K8) with purified ab45166 at dilution of 1:2500. The secondary antibody used was ab97051; a goat anti-rabbit IgG H&L (HRP) at dilution of 1/500. The sample was counter-stained with hematoxylin. Antigen retrieval was performed using EDTA Buffer; pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.



Flow Cytometry (Intracellular) - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

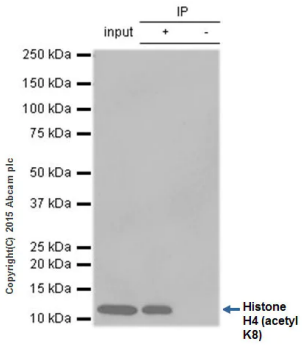
Histone H4 (acetyl K8) Flow Cytometry (Intracellular) staining using rabbit Anti-Histone H4 (acetyl K8) antibody

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) treated (Red)/untreated (Green) with 500ng/ml Trichostatin A for 4 hours with purified ab45166 at 1/20 dilution. The secondary antibody was Goat anti rabbit IgG (Alexa Fluorr® 488) at 1/2000 dilution. A Rabbit monoclonal IgG (Black) was used as the isotype control and cells without incubation with primary antibody and secondary antibody (Blue) were used as unlabeled control.



ChIP-sequencing - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

Chromatin was prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 10^7 HeLa cells and 4 µg of ab45166 [EP1002Y]. ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 30 million reads.
Additional screenshots of mapped reads can be downloaded here.



Immunoprecipitation - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

ab45166 (purified) at 1/20 immunoprecipitating Histone H4 (acetyl K8) in HeLa treated with Trichostatin A whole cell lysate.
For western blotting, ab131366 VeriBlot for IP Detection Reagent (HRP) was used for detection (1/10000).

Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.

All lanes:
Immunoprecipitation - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166) at 1/20 dilution

Lane 1:
HeLa (human cervix adenocarcinoma) treated with Trichostatin A whole cell lysate at 10 µg

Lane 2:
(+) ab45166 + HeLa treated with Trichostatin A whole cell lysate

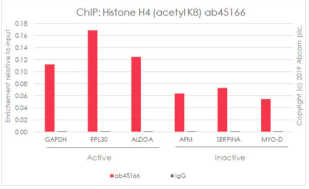
Lane 3:
(-) Rabbit monoclonal IgG (ab172730) instead of ab45166 in HeLa treated with Trichostatin A whole cell lysate.

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/10000 dilution

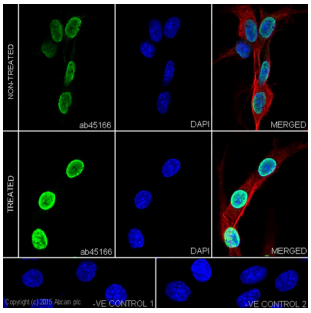
Predicted band size: 11 kDa

Observed band size: 11 kDa



ChIP - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

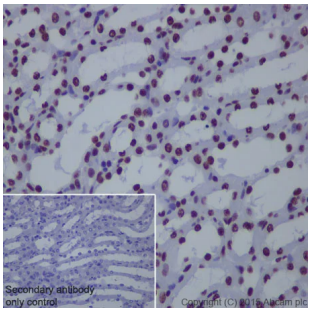
Chromatin was prepared from HeLa cells according to the Abcam X-ChIP protocol. Cells were fixed with formaldehyde for 10 minutes. The ChIP was performed with 25µg of chromatin, 2µg of ab45166 (red), and 20µl of Protein A/G sepharose beads. No antibody was added to the beads control (grey). The immunoprecipitated DNA was quantified by real time PCR (Taqman approach). Primers and probes are located in the first kb of the transcribed region.



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

Histone H4 (acetyl K8) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H4 (acetyl K8) antibody

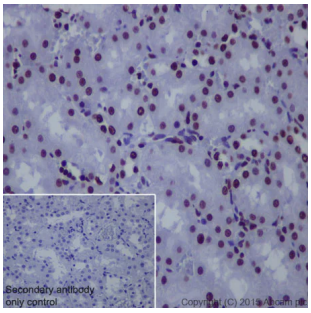
Immunocytochemistry/immunofluorescence staining of 4% paraformaldehyde fixed; 0.1% triton X 100 permeabilized C6 (rat glioma) cells (non-treated-top panels) and (C6 + TSA(500ng/ml, 4hr)-middle panels) with purified ab45166 at dilution of 1/150. The secondary antibody used was Alexa Fluor® 488; goat anti-rabbit IgG (ab150077) at a dilution of 1/1000. Nucleus was counter-stained with DAPI (blue). ab7291, a mouse anti-tubulin antibody (1/1000) was used to stain tubulin along with ab150120 (AlexaFluor®594 goat anti-mouse secondary, 1/1000) shown in the top right and middle right hand panels. The negative controls are shown in the bottom two panels- for negative control 1 rabbit primary antibody and anti-mouse secondary antibody (ab150120) was used. For negative control 2 mouse primary antibody (ab7291) and anti-rabbit secondary antibody (ab150077) was used.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

Histone H4 (acetyl K8) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H4 (acetyl K8) antibody

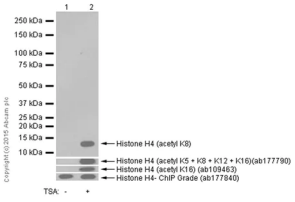
Immunohistochemical staining of paraffin-embedded mouse kidney sections labelling Histone H4 (acetyl K8) with purified ab45166 at dilution of 1:2500. The secondary antibody used was ab97051; a goat anti-rabbit IgG H&L (HRP) at dilution of 1/500. The sample was counter-stained with hematoxylin. Antigen retrieval was performed using EDTA Buffer; pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

Histone H4 (acetyl K8) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H4 (acetyl K8) antibody

Immunohistochemical staining of paraffin-embedded rat kidney sections labelling Histone H4 (acetyl K8) with purified ab45166 at dilution of 1:2500. The secondary antibody used was ab97051; a goat anti-rabbit IgG H&L (HRP) at dilution of 1/500. The sample was counter-stained with hematoxylin. Antigen retrieval was performed using EDTA Buffer; pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.



Western blot - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

Histone H4 (acetyl K8) Western blot staining using rabbit Anti-Histone H4 (acetyl K8) antibody

Blocking and diluting buffer 5% NFDM/TBST
All lanes:
Western blot - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166) at 1/5000 dilution

Lane 1:
Untreated HeLa (human cervix adenocarcinoma) whole cell lysate at 10 µg

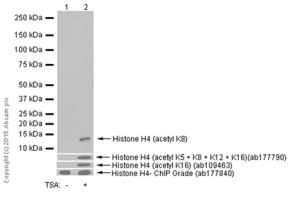
Lane 2:
HeLa (human cervix adenocarcinoma) treated with Trichostatin A whole cell lysate at 10 µg

Secondary

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

Predicted band size: 11 kDa

Observed band size: 11 kDa



Western blot - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

Blocking and diluting buffer 5% NFDM/TBST
All lanes:
Western blot - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166) at 1/5000 dilution

Lane 1:
Untreated NIH/3T3 (mouse embryo) whole cell lysate at 10 µg

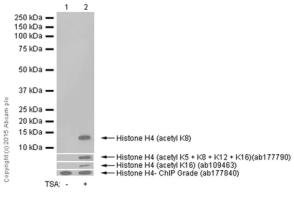
Lane 2:
NIH/3T3 (mouse embryo) treated with Trichostatin A whole cell lysate at 10 µg

Secondary

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

Predicted band size: 11 kDa

Observed band size: 11 kDa



Western blot - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166)

Blocking and diluting buffer 5% NFDM/TBST
All lanes:
Western blot - Anti-Histone H4 (acetyl K8) antibody [EP1002Y] - ChIP Grade (ab45166) at 1/5000 dilution

Lane 1:
Untreated C6 (rat glioma) whole cell lysate at 10 µg

Lane 2:
C6 (rat glioma) treated with Trichostatin A whole cell lysate at 10 µg

Secondary

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