abcam

ab320816

Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] - 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
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR28340-173
Purification technique	Affinity purification Protein A
Concentration	1.043 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

PepArr

Tested

Species	Synthetic peptide
Dilution info	-

Notes	-

Expected

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

Not recommended

Species	Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Synthetic peptide, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Synthetic peptide, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Synthetic peptide, Rat
Dilution info	-
Notes	-

ChIP-seq

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat, Synthetic peptide
Dilution info	-
Notes	-

ChIC/CUT&RUN-seq

Not recommended

Species	Human, Mouse, Synthetic peptide, Rat
Dilution info	-
Notes	-

Target data

See full target information H4C1 acK12

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

Notes

ab320816 is the carrier-free version of ab320815.

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.

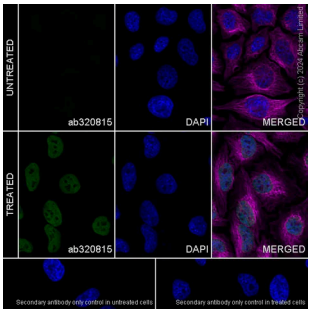
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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10 product images



Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] - BSA and Azide free (ab320816)

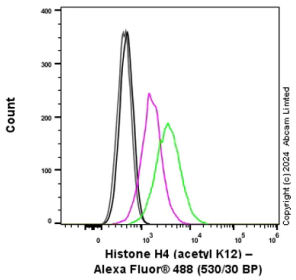
This data was developed using ab320815, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa (human cervical adenocarcinoma epithelial cell) cells labelling Histone H4 (acetyl K12) with ab320815 at 1/500 (1.044 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/mL dilution (Green).

Confocal image showing increased nuclear staining in HeLa cells treated with Trichostatin A (500 ng/mL) for 4 hr (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/mL dilution.

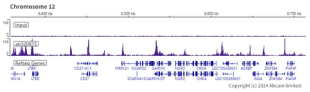


Flow Cytometry - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] - BSA and Azide free (ab320816)

This data was developed using ab320815, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervical adenocarcinoma epithelial cell) treated with 500ng/ml Trichostatin A for another 4h (Green) /Untreated control (Magenta) cells labelling Histone H4 (acetyl K12) with ab320815 at 1/50 dilution (1ug) / magenta and green compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 488) (ab199091) (Black) and Grey isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

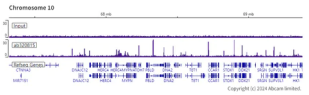
Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



ChIP-sequencing - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] - BSA and Azide free (ab320816)

This data was developed using ab320815, the same antibody clone in a different buffer formulation.

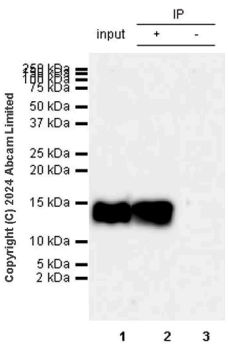
Chromatin was prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 10^7 cells and 4 µg of ab320815 [EPR28340-173]. ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 60 million reads. The Input control is also shown.



ChIP-sequencing - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] - BSA and Azide free (ab320816)

This data was developed using ab320815, the same antibody clone in a different buffer formulation.

Chromatin was prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 10^7 cells and 4 µg of ab320815 [EPR28340-173]. ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 60 million reads. The Input control is also shown.



Immunoprecipitation - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] - BSA and Azide free (ab320816)

This data was developed using ab320815, the same antibody clone in a different buffer formulation.

Histone H4 (acetyl K12) was immunoprecipitated from 0.35 mg HeLa (human cervical adenocarcinoma epithelial cell) treated with 500ng/ml TSA for 4h whole cell lysate with ab320815 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab320815 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: HeLa (human cervical adenocarcinoma epithelial cell) treated with 500ng/ml TSA for 4h whole cell lysate 10ug
Lane 2: ab320815 IP in HeLa (human cervical adenocarcinoma epithelial cell) treated with 500ng/ml TSA for 4h whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab320815 in HeLa treated with 500ng/ml TSA for 4h whole cell lysate

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

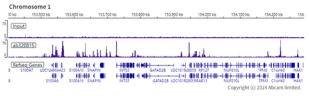
The IP experiment was performed by ab320815 (capture antibody), and band detected by another Anti-Histone H4 (acetyl K12) antibody [EPR17906] (ab177793).
All lanes:
Immunoprecipitation - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] (ab320815) at 1/30 dilution

All lanes:
HeLa (human cervical adenocarcinoma epithelial cell) treated with 500ng/ml TSA for 4h whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

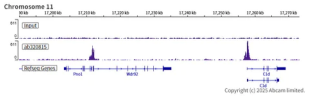
Exposure time: 67s



ChIP-sequencing - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] - BSA and Azide free (ab320816)

This data was developed using ab320815, the same antibody clone in a different buffer formulation.

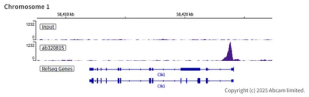
Chromatin was prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 10^7 cells and 4 µg of ab320815 [EPR28340-173]. ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 60 million reads. The Input control is also shown.



ChIP-sequencing - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] - BSA and Azide free (ab320816)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (,ab320815).

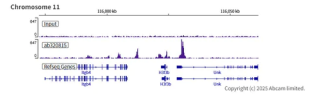
Chromatin was prepared from NIH/3T3 cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 10^7 cells and 4 µg of ab320815 [EPR28340-173]. ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 60 million reads. The Input control is also shown.



ChIP-sequencing - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] - BSA and Azide free (ab320816)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (,ab320815).

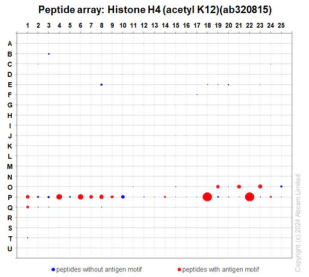
Chromatin was prepared from NIH/3T3 cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 10^7 cells and 4 µg of ab320815 [EPR28340-173]. ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 60 million reads. The Input control is also shown.



ChIP-sequencing - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] - BSA and Azide free (ab320816)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (,ab320815).

Chromatin was prepared from NIH/3T3 cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 10^7 cells and 4 µg of ab320815 [EPR28340-173]. ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 60 million reads. The Input control is also shown.



Peptide Array - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] - BSA and Azide free (ab320816)

This data was developed using ab320815, the same antibody clone in a different buffer formulation.

Peptide array analysis of ab320815 at 1:5000 (0.1 ug/ml) followed by a Goat Anti-Rabbit IgG, (H+L), Fluo 647nm conjugated at 1:50,000 dilution.

ab320815 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 the area under the 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, is available under the Product Protocol section.

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