abcam

ab320815

Anti-Histone H4 (acetyl K12) antibody [EPR28340-173]

Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] is a Rabbit Monoclonal antibody that is used in Histone H4 (acetyl K12) ChIP-seq, Flow Cytometry, ICC/IF, IP, PepArr. Suitable for Human samples.

Unmodified histone H4 at specific residues are useful for understanding the effect of different cell treatments on histone modification enzymes. The modification or un-modification of a residue can have a major impact on cellular gene regulation.

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
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR28340-173
Purification technique	Affinity purification Protein A
Concentration	0.522 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

PepArr

Tested

Species	Synthetic peptide
Dilution info	1/5000
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	1/30
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	1/500
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	1/50
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
Dilution info	4 µg for 10^7 Cells
Notes	-

Species	Mouse
Dilution info	4 µg for 10^7 Cells
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	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.

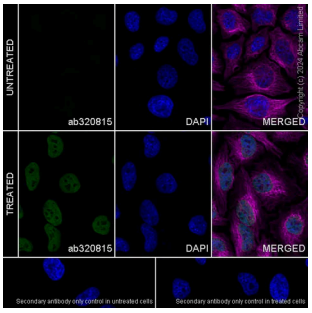
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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10 product images



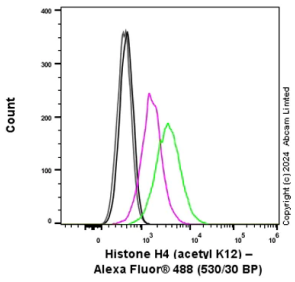
Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] (ab320815)

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).

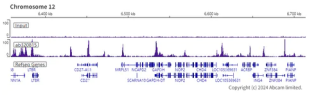
Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/mL dilution.



Flow Cytometry - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] (ab320815)

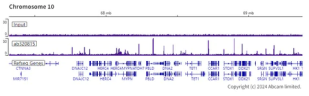
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervical adenocarcinoma epithelial cell) treated with 500ng/ml Trichostatin A for another 4h (Green) /Untreated control (Magenta) cells labelling Histone H4 (acetyl K12) with ab320815 at 1/50 dilution (1ug) / 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.



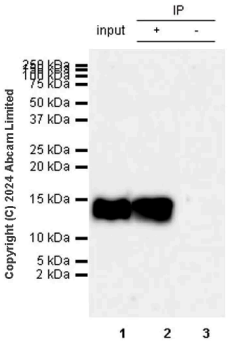
ChIP-sequencing - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] (ab320815)

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.



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Immunoprecipitation - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] (ab320815)

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).

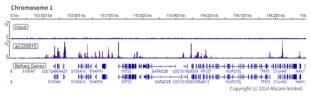
All lanes:
Immunoprecipitation - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] (ab320815) at 1/30 dilution

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

Secondary

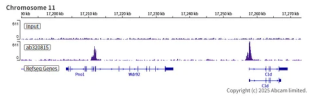
All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 67s



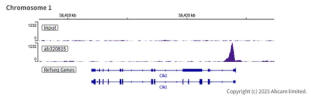
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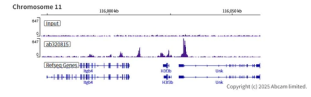
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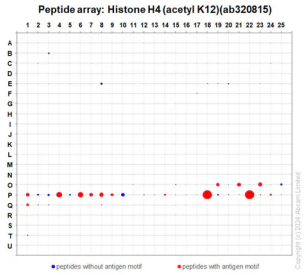
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Peptide Array - Anti-Histone H4 (acetyl K12) antibody [EPR28340-173] (ab320815)

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'.