abcam

ab31830

Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade

Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830) is a mouse monoclonal antibody detecting Histone H4 in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF, ChIP**. Suitable for **Cow, Human**.

- Over 50 publications
- Trusted since 2008

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.5 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	mAbcam 31830
Purity	IgG fraction
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	0.05-1 µg/mL
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Expected

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat, Cow, Recombinant fragment - Human
Dilution info	-
Notes	-

ChIP

Tested

Species	Human

Dilution info	5 µg for 25 µg chromatin
Notes	-

Expected

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

WB

Tested

Species	Recombinant fragment - Human
Dilution info	1 µg/mL
Notes	-

Species	Cow
Dilution info	1 µg/mL
Notes	-

Species	Human
Dilution info	1 µg/mL
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	5 µg/mL
Notes	-

Expected

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

Target data

See full target information H4C1

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 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

What is this antibody validated in?
Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF), ChIP in Cow, Human samples.

What is the molecular weight of Histone H4?
Anti-Histone H4 [mAbcam 31830] - ChIP Grade (ab31830) specifically detects a band for Histone H4 (UniProt: P62805) at a molecular weight of 14kDa.

Trusted by the scientific community
Anti-Histone H4 [mAbcam 31830] - ChIP Grade (ab31830) was first used in a scientific publication in 2008 and has been cited over 50 times in peer-reviewed journals.

Reviewed by scientists
Anti-Histone H4 [mAbcam 31830] - ChIP Grade (ab31830) has over 5 independent reviews from customers.

Other related products
We have a range of other formats of antibody clone [mAbcam 31830] also available for your convenience: ab31830, Alexa Fluor® 488 - ab197513, Alexa Fluor® 647 - ab197515, HRP - ab197517, Carrier free - ab238663

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

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.

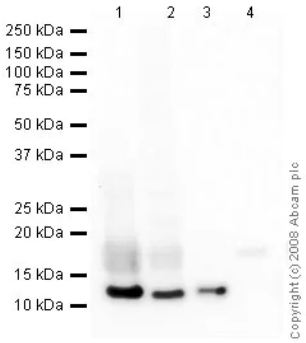
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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7 product images



Western blot - Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830)

All lanes:
Western blot - Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830) at 1 µg/mL

Lane 1:
Calf Thymus Histone Preparation Nuclear Lysate at 0.5 µg

Lane 2:
HeLa Histone Preparation Nuclear Lysate at 2.5 µg

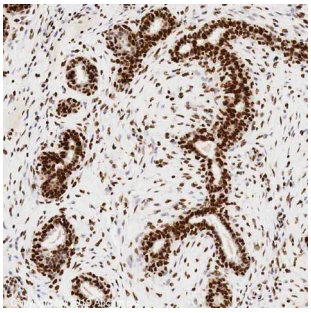
Lane 3:
Histone H4 Recombinant Protein at 0.1 µg

Lane 4:
Histone H3.1 Recombinant Protein at 0.1 µg

Secondary

All lanes:
Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

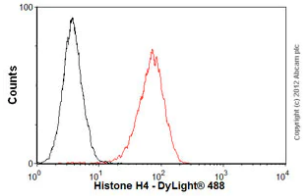
Performed under reducing conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830)

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

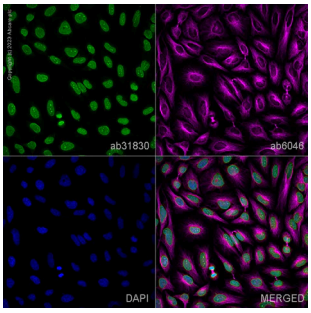
IHC image of Histone H4 staining in human breast fibroadenoma formalin fixed paraffin embedded tissue section, performed on a Leica Bond^{TM} system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab31380, 0.1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Flow Cytometry (Intracellular) - Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830)

Histone H4 Flow Cytometry (Intracellular) staining using mouse Anti-Histone H4 antibody

Overlay histogram showing HeLa cells stained with ab31830 (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 (ab31830, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



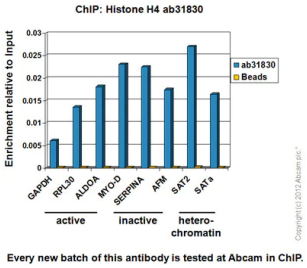
Immunocytochemistry/ Immunofluorescence - Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830)

Histone H4 Immunocytochemistry/ Immunofluorescence staining of HeLa cells using mouse Anti-Histone H4 antibody

ab31830 staining Histone H4 in HeLa cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-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 ab31830 at 1µg/ml and ab6046, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with ab150117, Goat polyclonal Secondary Antibody to Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and ab150080, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour magenta). Nuclear DNA was labelled with DAPI (shown in blue).

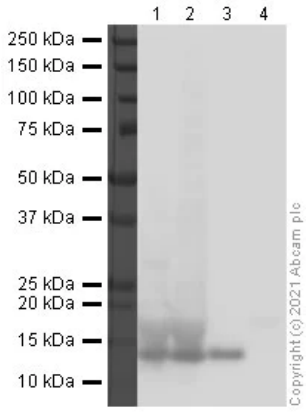
Also suitable in cells fixed with 4% paraformaldehyde (10 min).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



ChIP - Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830)

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, 5µg of ab31830 (blue), and 20µl of protein A/G sepharose beads. No antibody was added to the beads control (yellow). The immunoprecipitated DNA was quantified by real time PCR (Taqman approach for active and inactive loci, Sybr green approach for heterochromatic loci). Primers and probes are located in the first kb of the transcribed region.



Western blot - Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830)

All lanes:
Western blot - Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830) at 1 µg/mL

Lane 1:
Calf Thymus Histone Preparation Nuclear Lysate at 0.5 µg/mL

Lane 2:
HeLa Nuclear Lysate (Triton enriched) at 10 µg/mL

Lane 3:
Histone H4 Recombinant Protein at 0.1 µg/mL

Lane 4:
Histone H3.1 Recombinant Protein at 0.1 µg/mL

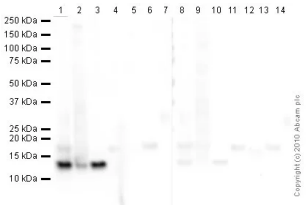
Secondary

All lanes:
Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Exposure time: 10s



Western blot - Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830)

Histone H4 Western blot staining using mouse Anti-Histone H4 antibody

All lanes:
Western blot - Anti-Histone H4 antibody [mAbcam 31830] - ChIP Grade (ab31830) at 5 µg/mL

Lane 1:
Calf Thymus Histone Preparation Nuclear Lysate at 0.5 µg

Lane 2:
HeLa Histone Preparation Nuclear Lysate at 2.5 µg

Lane 3:
Histone H4 Recombinant Protein at 0.1 µg

Lane 4:

Histone H3.1 Recombinant Protein at 0.1 µg

Lane 5:
Histone H2A Recombinant Protein at 0.1 µg

Lane 6:
Histone H2B Recombinant Protein at 0.1 µg

Lane 7:
Histone H1 Recombinant Protein at 0.1 µg

Lane 8:
Calf Thymus Histone Preparation Nuclear Lysate at 0.5 µg with Human Histone H4 peptide (ab13843)

Lane 9:
HeLa Histone Preparation Nuclear Lysate at 2.5 µg with Human Histone H4 peptide (ab13843)

Lane 10:
Histone H4 Recombinant Protein at 0.1 µg with Human Histone H4 peptide (ab13843)

Lane 11:
Histone H3.1 Recombinant Protein at 0.1 µg with Human Histone H4 peptide (ab13843)

Lane 12:
Histone H2A Recombinant Protein at 0.1 µg with Human Histone H4 peptide (ab13843)

Lane 13:
Histone H2B Recombinant Protein at 0.1 µg with Human Histone H4 peptide (ab13843)

Lane 14:
Histone H1 Recombinant Protein at 0.1 µg with Human Histone H4 peptide (ab13843)

Secondary

All lanes:
Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Exposure time: 2min

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