abcam

ab14955

Anti-Histone H3 (phospho S10) antibody [mAbcam 14955]

Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955) is a mouse monoclonal antibody detecting Histone H3 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF, ELISA**. Suitable for **Drosophila melanogaster, Human, Mouse**.

- Over 230 publications
- Trusted since 2005

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.5 Preservative: 0.02% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	mAbcam 14955
Purity	IgG fraction
Specificity	ab14955 recognises phospho S10 on Histone H3. It recognises a phospho S28 peptide by ELISA, but is not blocked by phospho S28 in WB.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	1 µg/mL
Notes	-

Species	Human
Dilution info	1 µg/mL
Notes	-

Expected

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

Predicted

Species	Rat, Chicken, Saccharomyces cerevisiae, Xenopus laevis, Arabidopsis thaliana, Caenorhabditis elegans, Indian muntjac, Monkey, Schizosaccharomyces pombe, Zebrafish, Mammals, Tobacco, Chlamydomonas reinhardtii, African green monkey, Aspergillus nidulans, Neurospora crassa, Oncopeltus
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-

Notes	-

Expected

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

Not recommended

Species	Mouse, Rat, Chicken, Saccharomyces cerevisiae, Xenopus laevis, Arabidopsis thaliana, Caenorhabditis elegans, Indian muntjac, Monkey, Schizosaccharomyces pombe, Zebrafish, Mammals, Tobacco, Chlamydomonas reinhardtii, African green monkey, Aspergillus nidulans, Neurospora crassa, Oncopeltus, Synthetic peptide - Human
Dilution info	-
Notes	-

ELISA

Tested

Species	Synthetic peptide - Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat, Chicken, Saccharomyces cerevisiae, Xenopus laevis, Arabidopsis thaliana, Caenorhabditis elegans, Indian muntjac, Monkey, Schizosaccharomyces pombe, Zebrafish, Mammals, Tobacco, Chlamydomonas reinhardtii, African green monkey, Aspergillus nidulans, Neurospora crassa, Oncopeltus

Dilution info	-
Notes	-

WB

Tested

Species	Drosophila melanogaster
Dilution info	1-5 µg/mL
Notes	-

Species	Human
Dilution info	1-5 µg/mL
Notes	-

Expected

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

Predicted

Species	Rat, Chicken, Saccharomyces cerevisiae, Xenopus laevis, Arabidopsis thaliana, Caenorhabditis elegans, Indian muntjac, Monkey, Schizosaccharomyces pombe, Zebrafish, Mammals, Tobacco, Chlamydomonas reinhardtii, African green monkey, Aspergillus nidulans, Neurospora crassa, Oncopeltus
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat, Chicken, Saccharomyces cerevisiae, Xenopus laevis, Arabidopsis thaliana, Caenorhabditis elegans, Indian muntjac, Monkey, Schizosaccharomyces pombe, Zebrafish, Mammals, Tobacco, Chlamydomonas reinhardtii, African green monkey, Aspergillus nidulans, Neurospora crassa, Oncopeltus
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide - Human
Dilution info	-
Notes	-

Target data

See full target information H3C1 phospho S10

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 H3 (phospho S10) antibody [mAbcam 14955] (ab14955) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF), ELISA in Drosophila melanogaster, Human, Mouse samples.

What is the molecular weight of Histone H3?
Anti-Histone H3 (phospho S10) [mAbcam 14955] (ab14955) specifically detects a band for Histone H3 (UniProt: P68431) at a molecular weight of 15kDa.

Trusted by the scientific community
Anti-Histone H3 (phospho S10) [mAbcam 14955] (ab14955) was first used in a scientific publication in 2005 and has been cited over 230 times in peer-reviewed journals.

Reviewed by scientists
Anti-Histone H3 (phospho S10) [mAbcam 14955] (ab14955) has over 20 independent reviews from customers.

Other related products
We have a range of other formats of antibody clone [mAbcam 14955] also available for your convenience: ab14955, Alexa Fluor® 647 - ab196698, Alexa Fluor® 488 - ab197502, Carrier free - ab238673

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

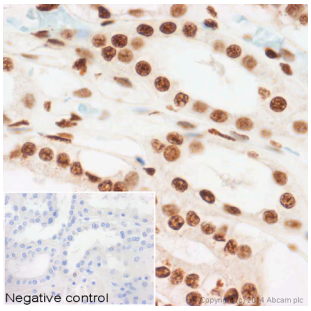
We do not recommend this combination. It is not covered by our product promise.

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.

10 product images

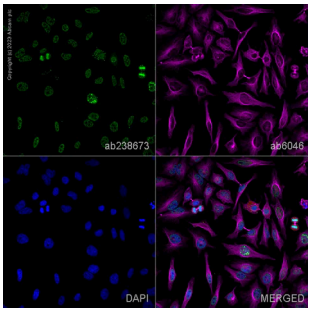


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955)

Histone H3 (phospho S10) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Histone H3 (phospho S10) antibody

IHC image of ab14955 staining Histone H3 (phospho S10) in human kidney formalin fixed paraffin embedded tissue sections, performed on a Leica Bond.
The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab14955, 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 hematoxylin and mounted with DPX. No primary antibody was used in the negative control (shown on the inset).

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.



Immunocytochemistry/ Immunofluorescence - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955)

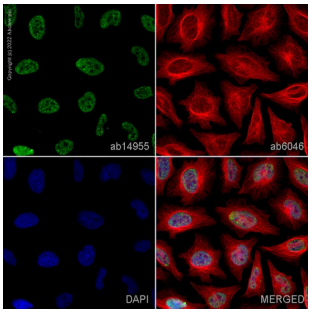
Histone H3 (phospho S10) Immunocytochemistry/ Immunofluorescence staining of HeLa cells using mouse Anti-Histone H3 (phospho S10) antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS only (ab238673).

ab238673 staining Histone H3 (phospho S10) in HeLa cells. The cells were fixed with 4% paraformaldehyde (10 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 ab238673 at 5µg/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 100% methanol (5 min).

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

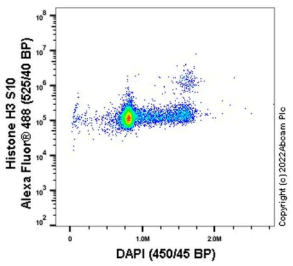


Immunocytochemistry/ Immunofluorescence - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955)

Histone H3 (phospho S10) Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Histone H3 (phospho S10) antibody

ab14955 staining Histone H3 (phospho S10) in HeLa cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Tween 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 ab14955 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 red). Nuclear DNA was labelled with DAPI (shown in blue).
Also suitable in cells fixed with 100% methanol (5 min).

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

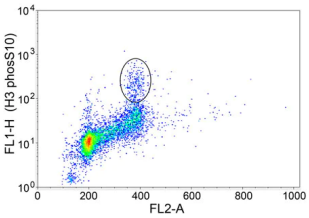


Flow Cytometry (Intracellular) - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955)

Histone H3 (phospho S10) Flow Cytometry (Intracellular) staining using mouse Anti-Histone H3 (phospho S10) antibody

Flow cytometry dot plot showing HeLa cells stained with ab14955 (red line). The cells were fixed with 100% ethanol. The cells were incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab14955) (1x 10^6 in 100µl at 1µg/ml (1/500)) for 30 min at 22°C. The secondary antibody Goat anti-mouse IgG H&L (Alexa Fluor® 488, pre-adsorbed) (ab150117) was used at 1/4000 for 30 min at 22°C. DNA staining was performed by pre-incubation with RNase A (250µg/ml) followed by DAPI.

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

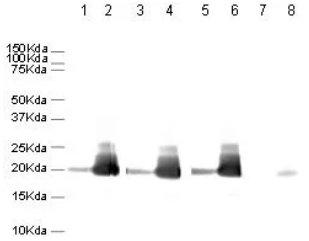


This image is courtesy of a customer review submitted by Dr Kirk McManus

Flow Cytometry (Intracellular) - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955)

Histone H3 (phospho S10) Flow Cytometry (Intracellular) staining using mouse Anti-Histone H3 (phospho S10) antibody

ab14955 (1/1000) stainning a population of HeLa (Human epithelial cell line from cervix adenocarcinoma) cells positive for Histone H3 (phospho S10). Cells were trypsizined, pelleted and fixed in ice cold ethanol. Cellular debris was eliminated and the FL2-A/FL2-W was used to eliminate clumping cells. For further experimental details please refer to abreview.



Western blot - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955)

Histone H3 (phospho S10) Western blot staining using mouse Anti-Histone H3 (phospho S10) antibody

All lanes:
Western blot - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955) at 0.5 µg/mL

Lane 1:
Control HeLa Histone prep at 5 µg

Lane 2:
Colecemid treated HeLa Histone prep at 5 µg

Lane 3:
Control HeLa Histone prep at 5 µg with Human Histone H3 (unmodified) peptide (ab7228)

Lane 4:
Colecemid treated HeLa Histone prep at 5 µg with Human Histone H3 (unmodified) peptide (ab7228)

Lane 5:
Control HeLa Histone prep at 5 µg with Human Histone H3 (phospho S28) peptide (ab14793)

Lane 6:
Colecemid treated HeLa Histone prep at 5 µg with Human Histone H3 (phospho S28) peptide (ab14793)

Lane 7:
Control HeLa Histone prep at 5 µg with Human Histone H3 (phospho S10) peptide (ab11477)

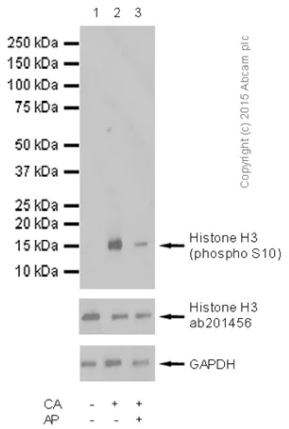
Lane 8:
Colecemid treated HeLa Histone prep at 5 µg with Human Histone H3 (phospho S10) peptide (ab11477)

Secondary

All lanes:
Western blot - Rabbit Anti-Mouse IgG H&L (HRP) (ab6728) at 1/5000 dilution

Predicted band size: 15 kDa

Observed band size: 20 kDa



Western blot - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955)

Histone H3 (phospho S10) Western blot staining using mouse Anti-Histone H3 (phospho S10) antibody

All lanes:
Western blot - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955) at 1/2000 dilution

Lane 1:
Untreated HeLa (Human epithelial cell line from cervix adenocarcinoma) cell lysate at 10 µg

Lane 2:
HeLa cell lysate treated with calyculin A at 10 µg

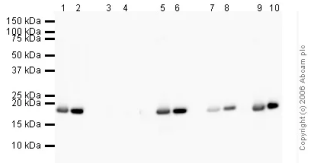
Lane 3:
HeLa cell lysate treated with calyculin A and alkaline phosphatase at 10 µg

Secondary

All lanes:
HRP goat anti-rabbit (H+L) at 1/20000 dilution

Predicted band size: 15 kDa

Exposure time: 1s



Western blot - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955)

Histone H3 (phospho S10) Western blot staining using mouse Anti-Histone H3 (phospho S10) antibody

All lanes:
Western blot - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955) at 1 µg/mL

Lane 1:
Control HeLa Histone Prep at 0.5 µg

Lane 2:
Colcemid treated HeLa Histone prep at 0.5 µg

Lane 3:
Control HeLa Histone Prep at 0.5 µg with Human Histone H3 (tri methyl K9, phospho S10) peptide (ab15644)

Lane 4:
Colcemid treated HeLa Histone prep at 0.5 µg with Human Histone H3 (tri methyl K9, phospho S10) peptide (ab15644)

Lane 5:
Control HeLa Histone Prep at 0.5 µg with Human Histone H3 (unmodified) peptide (ab7228)

Lane 6:
Colcemid treated HeLa Histone prep at 0.5 µg with Human Histone H3 (unmodified) peptide (ab7228)

Lane 7:
Control HeLa Histone Prep at 0.5 µg with Human Histone H3 (phospho S10) peptide (ab11477)

Lane 8:
Colcemid treated HeLa Histone prep at 0.5 µg with Human Histone H3 (phospho S10) peptide (ab11477)

Lane 9:
Control HeLa Histone Prep at 0.5 µg with Human Histone H3 (phospho S28) peptide (ab14793)

Lane 10:
Colcemid treated HeLa Histone prep at 0.5 µg with Human Histone H3 (phospho S28) peptide (ab14793)

Secondary

All lanes:
Rabbit polyclonal to Mouse IgG H&L (HRP) at 1/5000 dilution

Performed under reducing conditions.

Predicted band size: 15 kDa

Observed band size: 17 kDa

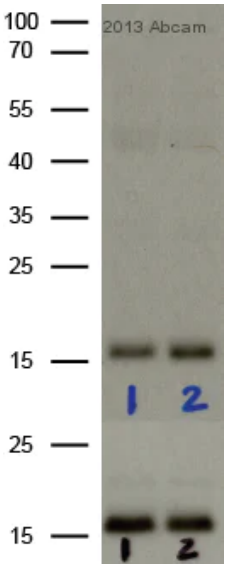


Image courtesy of Richelle Sopko, Harvard University, U.S.A

Western blot - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955)

Blocking: 10% BSA
wee shRNA embryos (lane 2) should display elevated phospho H3Ser10 levels relative to wild type

All lanes:
Western blot - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955) at 1/1000 dilution

Lane 1:
Wild type 0-4 hour old fruit fly embryo lysate

Lane 2:
0-4 hour old fruit fly embryo lysate expressing wee RNAi

Secondary

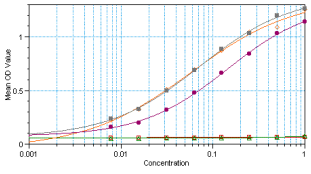
All lanes:
Anti-mouse IgG, peroxidase-linked at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 15 kDa

Exposure time: 5s



ELISA - Anti-Histone H3 (phospho S10) antibody [mAbcam 14955] (ab14955)

By ELISA, ab14955 detects:
the singly modified phospho S10 peptide and the dual modified phospho S10 and tri methyl K9 peptide (the orange and grey lines respectively),
less strongly detects the phospho S28 peptide (purple line),
does not detect the equivalent non-modified Histone H3 peptide for S10 or the singly modified tri methyl K9 peptide (the 2 lines at the bottom of the figure).

The antibody recognises phospho S28 by ELISA (although a phospho S28 peptide does not block the antibody in Western blotting).

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