abcam

ab201456

Anti-Histone H3 antibody [EPR17785] - Nuclear Marker

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
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR17785
Purification technique	Affinity purification Protein A
Concentration	0.531 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

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

PepArr

Tested

Species	Synthetic peptide
Dilution info	-
Notes	-

Expected

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

ChIP

Not recommended

Species	Mouse
Dilution info	-
Notes	We've tested ab201456 twice in ChIP and it does not work in our hands. We would recommend ab176842 for use in ChIP experiments.

Species	Rat
Dilution info	-
Notes	We've tested ab201456 twice in ChIP and it does not work in our hands. We would recommend ab176842 for use in ChIP experiments.

Species	Human
Dilution info	-
Notes	We've tested ab201456 twice in ChIP and it does not work in our hands. We would recommend ab176842 for use in ChIP experiments.

Species	Synthetic peptide
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/2000
Notes	-

Species	Rat
Dilution info	1/2000
Notes	-

Species	Human
Dilution info	1/2000
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/800
Notes	-

Expected

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

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/200
Notes	-

Species	Rat
Dilution info	1/200
Notes	-

Species	Human
Dilution info	1/200
Notes	-

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

Target data

See full target information H3C1

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

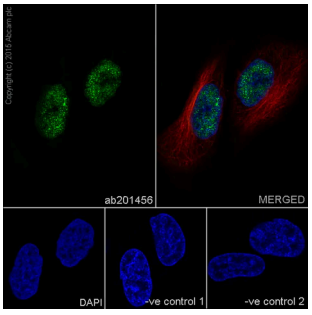
We do not recommend this combination. It is not covered by our product promise.

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



Immunocytochemistry/ Immunofluorescence - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

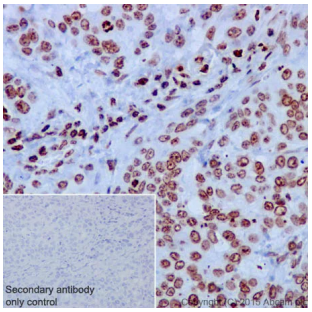
Histone H3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H3 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton-X100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling Histone H3 with ab201456 at

1/800 dilution, followed by AlexaFluor®488 Goat anti-Rabbit secondary antibody (ab150077) at 1/500 dilution (green).
Confocal image showing nuclear staining on HeLa cell line.

The nuclear counter stain is DAPI (blue).

Tubulin is stained with ab7291 anti-Tubulin (mouse mAb) at 1/1000 dilution, followed by AlexaFluor®594 Goat anti-Mouse secondary antibody (ab150120) at 1/500 dilution (red).
-ve control 1: ab201456 at 1/800 dilution followed by AlexaFluor®594 Goat anti-Mouse secondary antibody (ab150120) at 1/500 dilution.
-ve control 2: ab7291 anti-Tubulin (mouse mAb) at 1/1000 dilution, followed by AlexaFluor®488 Goat anti-Rabbit secondary antibody (ab150077) at 1/500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

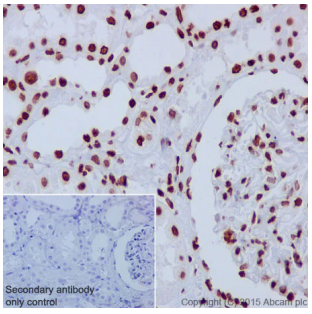
Histone H3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 antibody

Immunohistochemical analysis of paraffin-embedded Human cervix carcinoma tissue labeling Histone H3 with ab201456 at 1/200 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Nuclear staining on Human cervix carcinoma tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

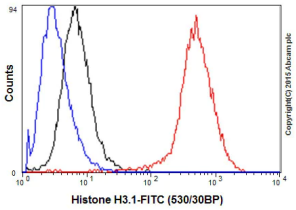
Histone H3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 antibody

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling Histone H3 with ab201456 at 1/200 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Nuclear staining on Human kidney tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

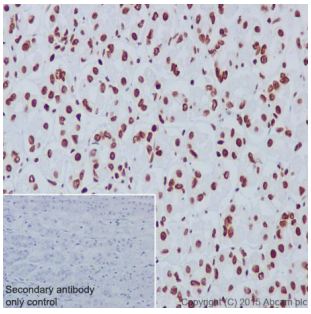
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

Histone H3 Flow Cytometry (Intracellular) staining using rabbit Anti-Histone H3 antibody

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling Histone H3with ab201456 at 1/100 dilution (red) compared with a rabbit monoclonal IgG isotype control (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/150 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

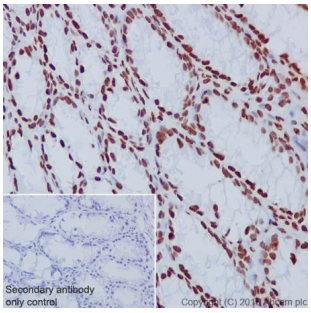
Histone H3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 antibody

Immunohistochemical analysis of paraffin-embedded Rat stomach tissue labeling Histone H3 with ab201456 at 1/200 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Nuclear staining on rat stomach tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

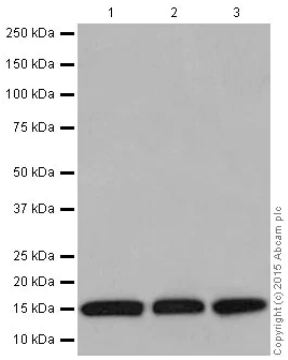
Histone H3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 antibody

Immunohistochemical analysis of paraffin-embedded Mouse colon tissue labeling Histone H3 with ab201456 at 1/200 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution.
Nuclear staining on mouse colon tissue is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

Histone H3 Western blot staining using rabbit Anti-Histone H3 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456) at 1/2000 dilution

Lane 1:
HeLa (Human epithelial cells from cervix adenocarcinoma) cell lysate at 20 µg

Lane 2:
HEK293 (Human embryonic kidney) cell lysate at 20 µg

Lane 3:
A375 (Human malignant melanoma) cell lysate at 20 µg

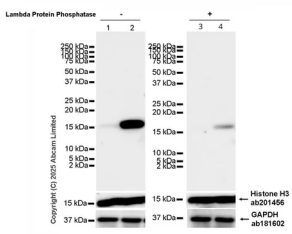
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 15 kDa

Observed band size: 15 kDa

Exposure time: 15s



Western blot - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

Histone H3 Western blot staining using rabbit Anti-Histone H3 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
ab181602 was used as GAPDH loading control at a 1/2200000 dilution. ab201456 was used for total protein control.

All lanes:
Western blot - Anti-Histone H3 (phospho S28) antibody [HTA28] (ab10543) at 1/1000 dilution

Lane 1:
Untreated HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate (untreated membrane) at 20 µg

Lane 2:
HeLa treated with 100ng/ml nocodazole for 16 hours whole cell lysate (untreated membrane) at 20 µg

Lane 3:
Untreated HeLa whole cell lysate (Lambda Protein Phosphatase treated membrane) at 20 µg

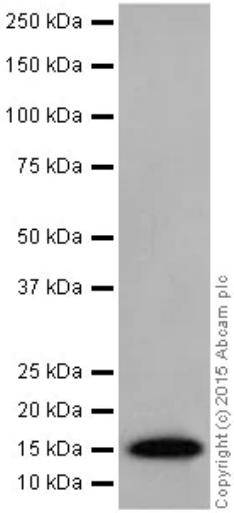
Lane 4:
HeLa treated with 100ng/ml nocodazole for 16 hours whole cell lysate (Lambda Protein Phosphatase treated membrane) at 20 µg

Secondary

All lanes:
Western blot at 1/10000 dilution

Predicted band size: 15 kDa

Exposure time: 15s



Western blot - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

Histone H3 Western blot staining of Human fetal brain lysate using rabbit Anti-Histone H3 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456) at 1/2000 dilution

All lanes:
Human fetal brain lysate at 10 µg

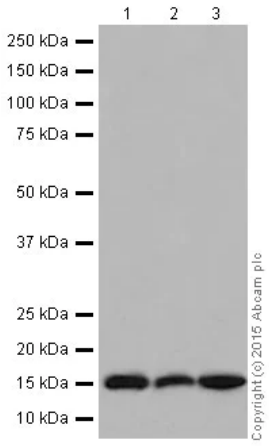
Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 15 kDa

Observed band size: 15 kDa

Exposure time: 3min



Western blot - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

Histone H3 Western blot staining using rabbit Anti-Histone H3 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456) at 1/2000 dilution

Lane 1:
Mouse kidney lysate at 10 µg

Lane 2:
Rat brain lysate at 10 µg

Lane 3:
NIH/3T3 (Mouse embyro fibroblast cells) cell lysate at 10 µg

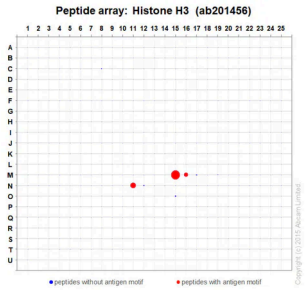
Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 15 kDa

Observed band size: 15 kDa

Exposure time: 1min



Peptide Array - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

Peptide array analysis of ab201456 at 1/10000 (0.02 ug/ml) dilution followed by a Goat Anti-Rabbit IgG, (H+L), Fluo 647nm conjugated at 1/50000 dilution.

Blocking buffer: 5% BSA in TBST.

ab201456 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.

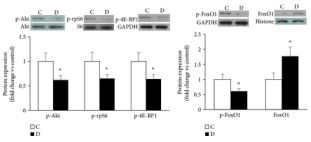


Image collected and cropped by CiteAb under a CC-BY license from the publication

Western blot - Anti-Histone H3 antibody [EPR17785] - Nuclear Marker (ab201456)

Histone H3 Western blot staining using rabbit Anti-Histone H3 antibody

Histone H3 western blot using anti-Histone H3 antibody [EPR17785] ab201456. Publication image and figure legend from Bitar, M. S., Nader, J., et al., 2018, Oxid Med Cell Longev, PubMed 30510624.

ab201456 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab201456 please see the product overview.

Diabetes alters key signaling molecules involved in skeletal muscle mass regulation. (a) Representative immunoblots and quantifications of phosphorylated Akt, S6, and 4E-BP1 protein levels in muscles of control and GK diabetic rats. (b) Total phosphorylated levels of FoxO1 and its nuclear localization relative to GAPDH and histone, respectively, were analyzed by Western blot. (c) Expression of MuRF1 and Atrogin 1 mRNAs relative to GAPDH was examined by real-time PCR. (d) Expression of miRNA 486 relative to U6 was determined using real-time PCR (e) PTEN protein level (e) and activity (f) were measured as described in Materials and Methods. (f) Key regulators of myogenesis including IGF-1 and PAX7 (g) were assessed in muscle using real-time RT-PCR-based technique. Abbreviation: C: control; D: diabetic. Values are means ± SEM for at least 6 animals/group. ⋆Significantly different from corresponding control values at $P \leq 0.05$.

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