abcam

ab238971

Anti-Histone H3 antibody [EPR16987] - BSA and Azide free

Anti-Histone H3 antibody [EPR16987] - BSA and Azide free (ab238971) is a rabbit recombinant monoclonal antibody for **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF, ChIP, PepArr**. Suitable for **Drosophila, Human, Mouse, Rat, S.cerevisiae, S.pombe**.

- BSA, sodium azide, and glycerol-free for easy conjugation
- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | Advanced Validation

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR16987
Purification technique	Affinity purification Protein A
Concentration	1.029 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ChIP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat, Schizosaccharomyces pombe, Saccharomyces cerevisiae, Drosophila melanogaster
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Dog, Sheep, Common marmoset
Dilution info	-
Notes	-

WB

Tested

Species	Mouse, Rat, Schizosaccharomyces pombe, Saccharomyces cerevisiae, Drosophila melanogaster, Human
Dilution info	-
Notes	-

Predicted

Species	Dog, Sheep, Common marmoset
Dilution info	-
Notes	-

PepArr

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat, Schizosaccharomyces pombe, Saccharomyces cerevisiae, Drosophila melanogaster
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Dog, Sheep, Common marmoset
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat, Schizosaccharomyces pombe, Saccharomyces cerevisiae, Drosophila melanogaster
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Dog, Sheep, Common marmoset
Dilution info	-

Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat, Schizosaccharomyces pombe, Saccharomyces cerevisiae, Drosophila melanogaster
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Dog, Sheep, Common marmoset
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Expected

Species	Schizosaccharomyces pombe, Saccharomyces cerevisiae, Drosophila melanogaster
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Dog, Sheep, Common marmoset
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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

What is this antibody validated in?
Anti-Histone H3 antibody [EPR16987] - BSA and Azide free (ab238971) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Flow Cytometry (Flow Cyt), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF), ChIP, Peptide Array in Drosophila melanogaster, Human, Mouse, Rat, Saccharomyces cerevisiae, Schizosaccharomyces pombe samples.

What is the molecular weight of Histone H3?
Anti-Histone H3 [EPR16987] - BSA and Azide free (ab238971) specifically detects a band for Histone H3 (UniProt: P68431) at a molecular weight of 15kDa.

Other related products
We have a range of other formats of antibody clone [EPR16987] also available for your convenience: ab176842, Alexa Fluor® 647 - ab207543, HRP - ab209023, Carrier free - ab238971, Alexa Fluor® 488 - ab252005, PE - ab314246, Alexa

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

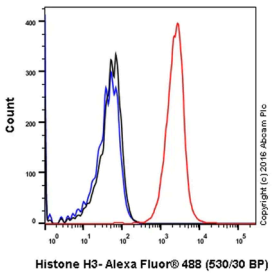
We do not recommend this combination. It is not covered by our product promise.

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.

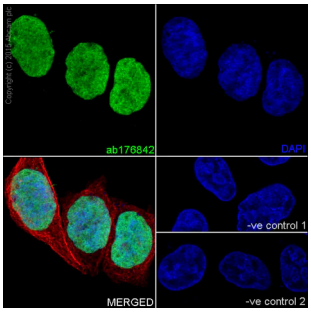
8 product images



Flow Cytometry (Intracellular) - Anti-Histone H3 antibody [EPR16987] - BSA and Azide free (ab238971)

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

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling Histone H3 with purified ab176842 at 1/40 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) was used as the unlabeled control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176842).

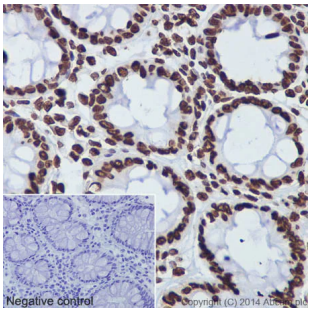


Immunocytochemistry/ Immunofluorescence - Anti-Histone H3 antibody [EPR16987] - BSA and Azide free (ab238971)

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

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling Histone H3 with ab176842 at 1/2000 dilution, followed by Goat anti-rabbit Alexa Fluor® 488 (IgG) (ab150077) secondary antibody at 1/400 dilution (green). Confocal image showing nuclear staining on HeLa cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/500 dilution and ab150120 (goat anti-mouse AlexaFluor®594 Goat secondary antibody) at 1/500 dilution (red).
The negative controls are as follows;
-ve control 1: ab176842 at 1/2000 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/500 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/400 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176842).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 antibody [EPR16987] - BSA and Azide free (ab238971)

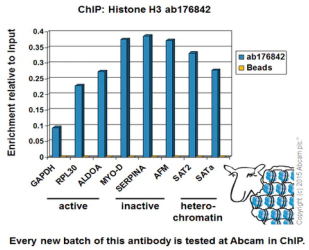
Histone H3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 antibody

Immunohistochemical analysis of paraffin-embedded human colon tissue labeling Histone H3 with ab176842 at 1/500 dilution, followed by Goat Anti-Rabbit HRP (IgG; H&L) secondary antibody

(ab97051) at 1/500 dilution. Nuclear staining on glandular epithelium of human colon tissue is observed. Counter stained with hematoxylin.
Negative control: Used PBS instead of primary antibody, secondary antibody Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

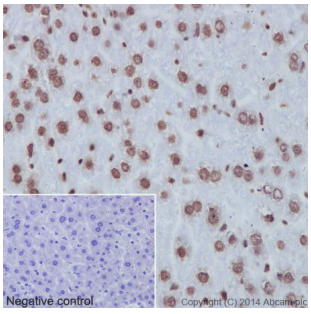
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide (ab176842).

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



ChIP - Anti-Histone H3 antibody [EPR16987] - BSA and Azide free (ab238971)

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, 2µg of ab176842 (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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176842).



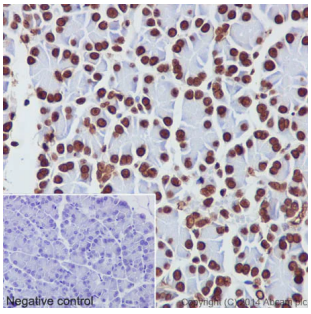
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 antibody [EPR16987] - BSA and Azide free (ab238971)

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

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Histone H3 with ab176842 at 1/500 dilution, followed by Goat Anti-Rabbit HRP (IgG H&L) secondary antibody (ab97051) at 1/500 dilution. Nuclear staining on mouse liver tissue is observed. Counter stained with Hematoxylin.
Negative control: Used PBS instead of primary antibody, secondary antibody Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176842).

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 [EPR16987] - BSA and Azide free (ab238971)

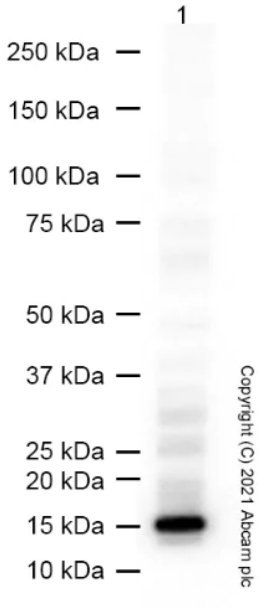
Histone H3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Histone H3 antibody

Immunohistochemical analysis of paraffin-embedded Rat pancreas tissue labeling Histone H3 with ab176842 at 1/500 dilution, followed by Goat Anti-Rabbit HRP (IgG H&L) secondary antibody

(ab97051) at 1/500 dilution. Nuclear staining on rat pancreas tissue is observed. Counter stained with Hematoxylin.
Negative control: Used PBS instead of primary antibody, secondary antibody Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176842).

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



Western blot - Anti-Histone H3 antibody [EPR16987] - BSA and Azide free (ab238971)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176842). Blocking and dilution buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Histone H3 antibody [EPR16987] - Nuclear Marker and ChIP Grade (ab176842) at 1/10000 dilution

All lanes:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

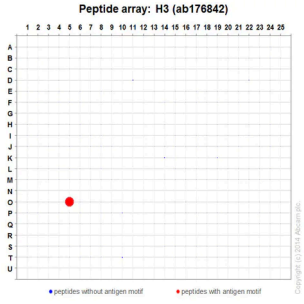
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 15 kDa

Observed band size: 15 kDa

Exposure time: 3s



Peptide Array - Anti-Histone H3 antibody [EPR16987] - BSA and Azide free (ab238971)

ab176842 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 area under 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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab176842).

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