abcam

ab32129

Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade

Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129) is a rabbit monoclonal antibody detecting Histone H3 in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF, ChIP, PepArr**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 40 publications
- Trusted since 2006

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	Y28
Purification technique	Affinity purification Protein A
Specificity	This antibody has weak cross-reactivity with H3R8me1 and H3K4me3 in peptide array. Further optimization may be needed to minimize the cross-reactivity in assays similar to peptide array
Concentration	0.539 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

CUT&Tag

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Expected

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

PepArr

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Human

Dilution info	1/50 - 1/200
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/50 - 1/200
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/50 - 1/200
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

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

ChIP

Tested

Species	Human
Dilution info	2 µg for 25 µg chromatin
Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Rat
Dilution info	1/500
Notes	-

Species	Human
Dilution info	1/500
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250
Notes	-

Expected

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

ChIP-seq

Tested

Species	Human
Dilution info	4 µg for 30 µg chromatin
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

ChIC/CUT&RUN-seq

Tested

Species	Human
Dilution info	5 µg
Notes	-

Expected

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

Notes	-

Target data

See full target information H3C1 acetyl K9

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

What is this antibody validated in?
Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF), ChIP, Peptide Array in Human, Mouse, Rat samples.

What is the molecular weight of Histone H3?
Anti-Histone H3 (acetyl K9) [Y28] - ChIP Grade (ab32129) specifically detects a band for Histone H3 (UniProt: P68431) at a molecular weight of 15kDa.

Trusted by the scientific community
Anti-Histone H3 (acetyl K9) [Y28] - ChIP Grade (ab32129) was first used in a scientific publication in 2006 and has been cited over 40 times in peer-reviewed journals.

Reviewed by scientists

Anti-Histone H3 (acetyl K9) [Y28] - ChIP Grade (ab32129) has over 5 independent reviews from customers.

Other related products
We have a range of other formats of antibody clone [Y28] also available for your convenience: ab32129, Alexa Fluor® 488 - ab200986, Alexa Fluor® 647 - ab200989, Carrier free - ab203951

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.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size 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

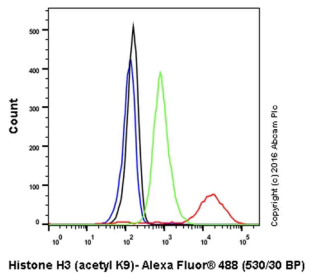
We do not recommend this combination. It is not covered by our product promise.

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.

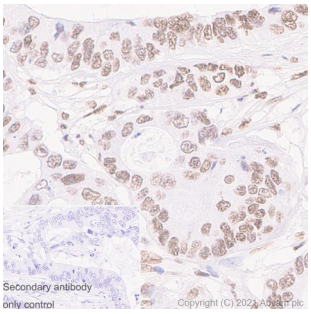
19 product images



Flow Cytometry (Intracellular) - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

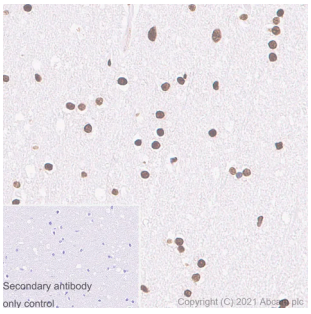
Histone H3 (acetyl K9) Flow Cytometry (Intracellular) staining using rabbit Anti-Histone H3 (acetyl K9) antibody

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) treated (Red)/untreated (Green) with 500ng/ml Trichostatin A for 4 hours with purified ab32129 at 1/230 dilution. The secondary antibody was Goat anti rabbit IgG (Alexa Fluorr® 488) at 1/2000 dilution. A Rabbit monoclonal IgG (Black) was used as the isotype control and cells without incubation with primary antibody and secondary antibody (Blue) were used as unlabeled control.



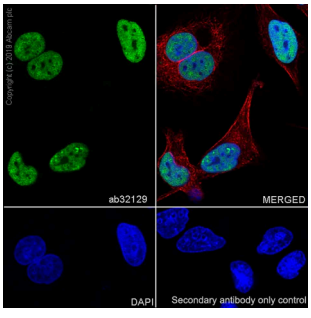
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

Immunohistochemical analysis of Paraffin-embedded sections human cerebrum tissue labelling Histone H3 (acetyl K9) with ab32129 at 1/2000 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Staining on human cerebrum tissue is observed. Counter stained with Haematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

Immunohistochemical analysis of Paraffin-embedded sections human colorectal carcinoma tissue labelling Histone H3 (acetyl K9) with ab32129 at 1/2000 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Staining on human colorectal carcinoma tissue is observed. Counter stained with Haematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

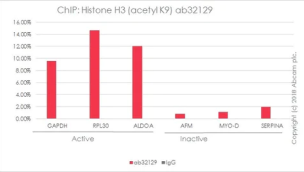


Immunocytochemistry/ Immunofluorescence - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

Histone H3 (acetyl K9) Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Histone H3 (acetyl K9) antibody

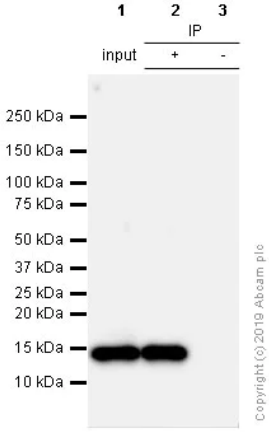
Immunocytochemistry/ Immunofluorescence analysis of HeLa (human cervix adenocarcinoma epithelial cell) cells labeling Histone H3 with purified ab32129 at 1/250 dilution (4 µg/mL). Cells were fixed in 100% Methanol and permeabilized with None. Cells were counterstained with

ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL) was used as the secondary antibody only control.



ChIP - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

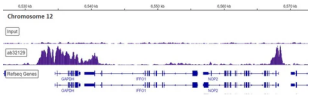
Chromatin was prepared from HeLa cells according to the Abcam X-ChIP protocol. Cells were fixed with formaldehyde for 10min.
The ChIP was performed with 25 µg of chromatin, 2 µg of ab32129 (red), and 20 µl of Protein A/G sepharose beads. No antibody was added to the beads control (grey). The immunoprecipitated DNA was quantified by real time PCR (Taqman approach).
Primers and probes are located in the first kb of the transcribed region.



Immunoprecipitation - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

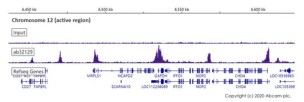
ab32129 (purified) at 1/30 dilution (20 µg/ml) immunoprecipitating Histone H3 acetyl K9 in TSA treated HeLa whole cell lysate.
Lane 1 (input): HeLa (human cervix adenocarcinoma epithelial cell) treated with 500ng/ml TSA for 4h whole cell lysate 10µg
Lane 2 (+): ab32129 & TSA treated HeLa whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab32129 in TSA treated HeLa whole cell lysate
For western blotting, ab32129 at 1/500 and veriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/1000 dilution.
Blocking and diluting buffer: 5% NFDM /TBST.
All lanes:
Immunoprecipitation - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

Predicted band size: 15 kDa



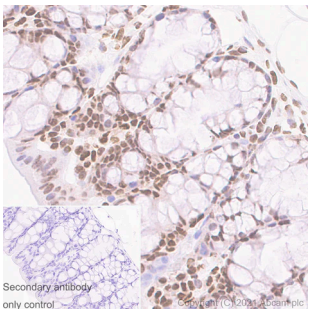
ChIP-sequencing - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

Chromatin was prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 30 µg of chromatin and 4 µg of Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129). ChIP DNA was sequenced on the Illumina NextSeq 500 to a depth of 30 million reads. ChIP-Seq validation performed by Active Motif, Carlsbad, CA. Additional screenshots of mapped reads can be downloaded here.



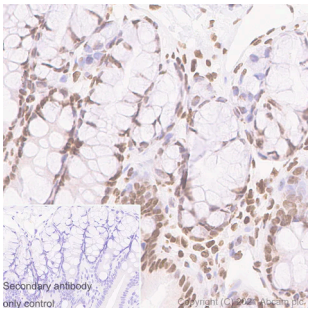
ChIP-sequencing - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

Chromatin was prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 107 HeLa cells and 4 µg of Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129). ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 30 million reads. Additional screenshots of mapped reads can be downloaded here.



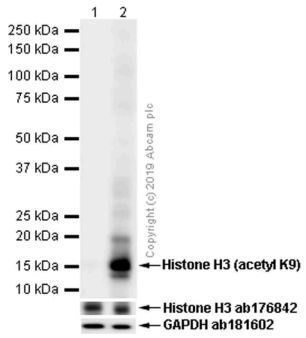
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

Immunohistochemical analysis of Paraffin-embedded sections mouse colon tissue labelling Histone H3 (acetyl K9) with ab32129 at 1/6000 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Staining on mouse colon tissue is observed. Counter stained with Haematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

Immunohistochemical analysis of Paraffin-embedded sections rat colon tissue labelling Histone H3 (acetyl K9) with ab32129 at 1/6000 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Staining on rat colon tissue is observed. Counter stained with Haematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

Blocking and diluting buffer and concentration: 5% NFDM/TBST. ab181602 was used as GAPDH loading control. ab176842 was for Histone H3 detection.
All lanes:
Western blot - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129) at 1/10000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 15 µg

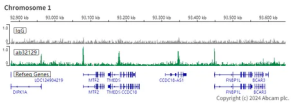
Lane 2:
HeLa (Human cervix adenocarcinoma epithelial cell) treated with 500ng/ml Trichostatin A for 4 hours whole cell lysate at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 15 kDa

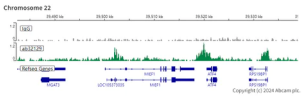
Observed band size: 15 kDa



ChIC/CUT&RUN sequencing - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

ChIC/CUT&RUN was performed using a pAG-MNase at a final concentration of 700 ng/mL, 2.5 x 10^5 HeLa (Human epithelial cell line from cervix adenocarcinoma) cells and 5 µg of ab32129 [Y28]. The resulting DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 10 million reads. The negative IgG control ab172730 is also shown.

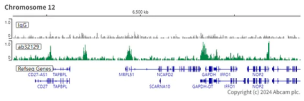
The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.



ChIC/CUT&RUN sequencing - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

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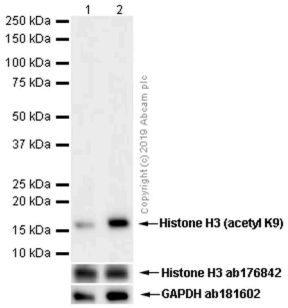
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ChIC/CUT&RUN sequencing - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

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The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.



Western blot - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

Blocking and diluting buffer and concentration: 5% NFDM/TBST. ab181602 was used as GAPDH loading control. ab176842 was for Histone H3 detection.
All lanes:
Western blot - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129) at 1/10000 dilution

Lane 1:
C6 (Rat glial tumor glial cell) whole cell lysate at 15 µg

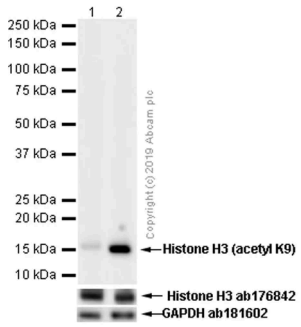
Lane 2:
C6 (Rat glial tumor glial cell) treated with 500ng/ml Trichostatin A for 4 hours whole cell lysate at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 15 kDa

Observed band size: 15 kDa



Western blot - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

Blocking and diluting buffer and concentration: 5% NFDM/TBST. ab181602 was used as GAPDH loading control. ab176842 was for Histone H3 detection.
All lanes:
Western blot - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129) at 1/10000 dilution

Lane 1:
NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate at 15 µg

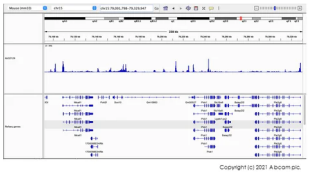
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NIH/3T3 (Mouse embryonic fibroblast) treated with 500ng/ml Trichostatin A for 4 hours whole cell lysate at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 15 kDa

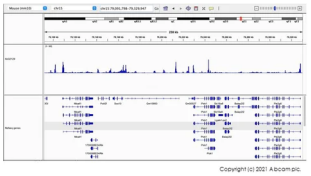
Observed band size: 15 kDa



This experiment and image is courtesy of Dr Marek Bartosovic, Gonçalo Castelo-Branco Group, Karolinska Institutet.

CUT&Tag sequencing - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

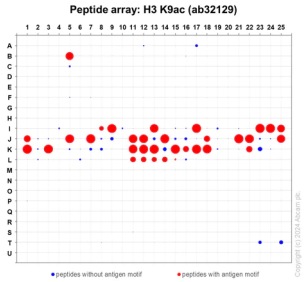
CUT&Tag-seq was performed using 200,000 Oli-neu (Oligodendrocyte progenitor) cells. Cells were permeabilized with 0.05% Digitonin and 0.01% NP-40 for 3 minutes. A 1:100 dilution of Recombinant Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129) was used, along with a Guinea pig anti-rabbit Secondary. DNA was seg using Illumina NovaSeq S Prime to a depth of 24 million reads.
This image is courtesy of Dr Marek Bartosovic, Gonçalo Castelo-Branco Group, Karolinska Institutet.



This experiment and image is courtesy of Dr Marek Bartosovic, Gonçalo Castelo-Branco Group, Karolinska Institutet

CUT&Tag - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

CUT&Tag-seq was performed using 200,000 Oli-neu (Oligodendrocyte progenitor) cells. Cells were permeabilized with 0.05% Digitonin and 0.01% NP-40 for 3 minutes. A 1:100 dilution of Recombinant Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129) was used, along with a Guinea pig anti-rabbit Secondary. DNA was seg using Illumina NovaSeq S Prime to a depth of 24 million reads. This image is courtesy of Dr Marek Bartosovic, Gonçalo Castelo-Branco Group, Karolinska Institutet. The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods.



Peptide Array - Anti-Histone H3 (acetyl K9) antibody [Y28] - ChIP Grade (ab32129)

ab32129 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.

Please note this antibody has weak cross-reactivity with H3R8me1 and H3K4me3 in peptide array. Further optimization may be needed to minimize the cross-reactivity in assays similar to peptide array.

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