abcam

ab313500

Anti-Histone H3 (tri methyl K4) antibody [EPR20551-225] - ChIP Grade - BSA and Azide free

Recombinant | RabMAb | Advanced Validation

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR20551-225
Specificity	We recommend to use 2% BSA as blocking and antibody dilution buffer.
Concentration	1.024 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

CUT&Tag

Tested

Species	Mouse
Dilution info	-

Notes	-

Expected

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

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

ChIC/CUT&RUN-seq

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	We recommend to use 2% BSA as blocking and antibody dilution buffer.

Species	Mouse
Dilution info	-
Notes	We recommend to use 2% BSA as blocking and antibody dilution buffer.

Species	Rat
Dilution info	-
Notes	We recommend to use 2% BSA as blocking and antibody dilution buffer.

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse, Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Synthetic peptide

Dilution info	-
Notes	-

Dot

Tested

Species	Synthetic peptide
Dilution info	-
Notes	-

Expected

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

PepArr

Tested

Species	Synthetic peptide
Dilution info	-
Notes	-

Expected

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

IP

Tested

Species	Mouse
Dilution info	-

Notes	-

Expected

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

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

ChIP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Synthetic peptide
Dilution info	-
Notes	-

ChIP-seq

Tested

Species	Human
Dilution info	-
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)

Expected

Species	Human
Dilution info	1/500
Notes	-

Species	Mouse
Dilution info	-
Notes	-

Species	Rat
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide

Dilution info	-
Notes	-

Target data

See full target information H3C1 tri methyl K4

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

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.

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

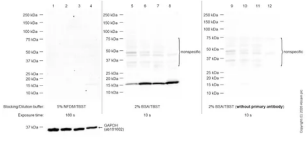
We do not recommend this combination. It is not covered by our product promise.

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.

3 product images



Western blot - Anti-Histone H3 (tri methyl K4) antibody [EPR20551-225] - ChIP Grade - BSA and Azide free (ab313500)

Histone H3 (tri methyl K4) Western blot staining using rabbit Anti-Histone H3 (tri methyl K4) antibody

This data was developed using ab213224, the same antibody clone in a different buffer formulation.

In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/1000000 dilution.

Blocking and diluting buffer and concentration: Lane 1-4: 5% NFDM/TBST Lane 5-12: 2% BSA/TBST
We recommend using 2% BSA as blocking and antibody dilution buffer.

All lanes:
Western blot - Anti-Histone H3 (tri methyl K4) antibody [EPR20551-225] - ChIP Grade (ab213224) at 1/1000 dilution

Lanes 1, 5 and 9:
Raji (human Burkitt's lymphoma B lymphocyte) whole cell lysate at 20 µg

Lanes 2, 6 and 10:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

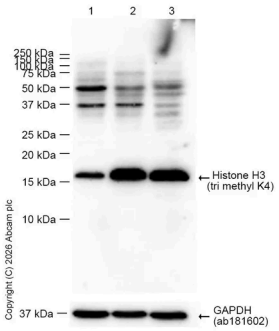
Lanes 3, 7 and 11:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Lanes 4, 8 and 12:
C6 (rat glial tumor glial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/20000 dilution

Exposure time: 40s



Western blot - Anti-Histone H3 (tri methyl K4) antibody [EPR20551-225] - ChIP Grade - BSA and Azide free (ab313500)

Histone H3 (tri methyl K4) Western blot staining using rabbit Anti-Histone H3 (tri methyl K4) antibody

This data was developed using ab213224, the same antibody clone in a different buffer formulation.
We recommend to use 2% BSA/TBST as blocking and antibody dilution buffer.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/1000000 dilution.

All lanes:
Western blot - Anti-Histone H3 (tri methyl K4) antibody [EPR20551-225] - ChIP Grade (ab213224) at 1/1000 dilution

Lane 1:
Raji (human Burkitt's lymphoma B lymphocyte) whole cell lysate at 20 µg

Lane 2:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

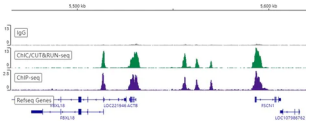
Lane 3:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/20000 dilution

Observed band size: 15 kDa, 36 kDa

Exposure time: 40s



ChIC/CUT&RUN sequencing - Anti-Histone H3 (tri methyl K4) antibody [EPR20551-225] - ChIP Grade - BSA and Azide free (ab313500)

ChIC/CUT&RUN was performed using a pAG-MNAse at a final concentration of 700 ng/mL, 2.5 x 10^5 HeLa (Human cervix adenocarcinoma epithelial cell line) cells and 2 µg of ab213224 [EPR20551-225]. 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 ChIP data was conducted on chromatin prepared from HeLa cells. Cells were fixed with 1% formaldehyde for 10 minutes. ChIP was performed with 10^7 HeLa cells and 4 µg of ab213224. ChIP DNA was sequenced on the Illumina NovaSeq 6000 to a depth of 30 million reads. The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods. Additional screenshots of mapped reads can be found in the Protocol booklet in the Product Protocol section. The University of Geneva owns patents relevant to ChIC (Chromatin Immuno-Cleavage) methods. This data was developed using ab213224, the same antibody clone in a different buffer formulation.

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