abcam

Product datasheet

Anti-Histone H2A (crotonyl K125) antibody [EP18770] ab195468

RabMAb

2 Images

Overview

Product name	Anti-Histone H2A (crotonyl K125) antibody [EP18770]
Description	Rabbit monoclonal [EP18770] to Histone H2A (crotonyl K125)
Host species	Rabbit
Tested applications	**Suitable for:** WB, PepArr
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Mouse embryo, testis and ovary lysates; NT2/D1, HL-60, NCCIT, F9, mESC, C2C12, 3T3-L1, NIH/3T3 and HeLa whole cell lysates; human ovary lysate.
General notes	Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EP18770
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab195468 in the following tested applications.

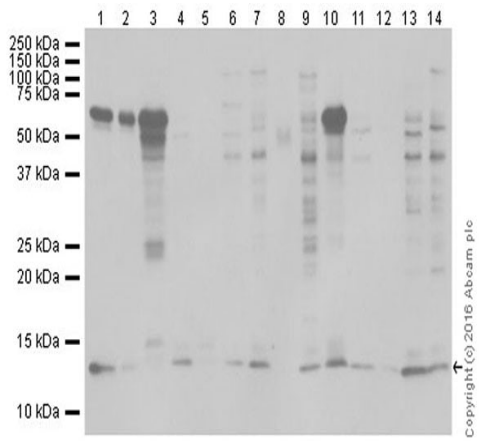
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 14 kDa (predicted molecular weight: 14 kDa).
PepArr		Use at an assay dependent concentration.

Target

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.
Sequence similarities	Belongs to the histone H2A family.
Post-translational modifications	The chromatin-associated form is phosphorylated on Thr-121 during mitosis. Deiminated on Arg-4 in granulocytes upon calcium entry. Monoubiquitination of Lys-120 by RING1 and RNF2/RING2 complex gives a specific tag for epigenetic transcriptional repression and participates in X chromosome inactivation of female mammals. It is involved in the initiation of both imprinted and random X inactivation. Ubiquitinated H2A is enriched in inactive X chromosome chromatin. Ubiquitination of H2A functions downstream of methylation of 'Lys-27' of histone H3. Monoubiquitination of Lys-120 by RNF2/RING2 can also be induced by ultraviolet and may be involved in DNA repair. Following DNA double-strand breaks (DSBs), it is ubiquitinated through 'Lys-63' linkage of ubiquitin moieties by the E2 ligase UBE2N and the E3 ligases RNF8 and RNF168, leading to the recruitment of repair proteins to sites of DNA damage. Monoubiquitination and ionizing radiation-induced 'Lys-63'-linked ubiquitination are distinct events. Phosphorylation on Ser-2 is enhanced during mitosis. Phosphorylation on Ser-2 by RPS6KA5/MSK1 directly represses transcription. Acetylation of H3 inhibits Ser-2 phosphorylation by RPS6KA5/MSK1. Symmetric dimethylation on Arg-4 by the PRDM1/PRMT5 complex may play a crucial role in the germ-cell lineage.
Cellular localization	Nucleus. Chromosome.

Images



Western blot - Anti-Histone H2A (crotonyl K125) antibody [EP18770] (ab195468)

All lanes : Anti-Histone H2A (crotonyl K125) antibody [EP18770] (ab195468) at 1/1000 dilution

Lane 1 : Mouse embryo lysate
Lane 2 : Mouse testis lysate
Lane 3 : Human ovary lysate
Lane 4 : NT2/D1 (Human malignant pluripotent embryonic carcinoma cell line) whole cell lysate
Lane 5 : HL-60 (Human promyelocytic leukemia cell line) whole cell lysate
Lane 6 : NCCIT (Human pluripotent embryonic carcinoma cell line) whole cell lysate
Lane 7 : F9 (Mouse embryonic testicular cancer cell line) whole cell lysate
Lane 8 : Human placenta lysate
Lane 9 : mESC (Mouse embryonic stem cell line) whole cell lysate
Lane 10 : Mouse ovary lysate
Lane 11 : C2C12 (Mouse myoblast cell line) whole cell lysate
Lane 12 : 3T3-L1 (Mouse embryonic fibroblast cell line) whole cell lysate
Lane 13 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 14 : NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate

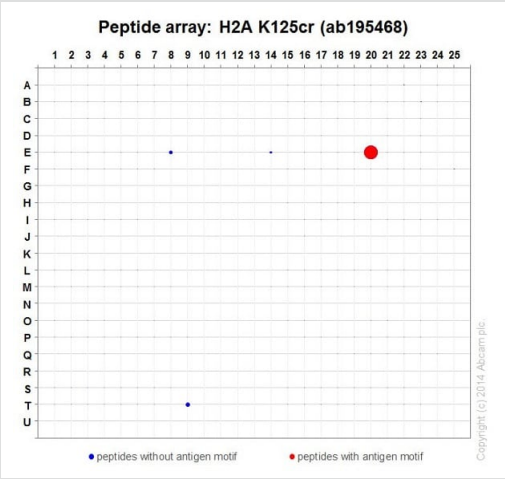
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 14 kDa
Observed band size: 14 kDa

Exposure time: 30 seconds

Blocking/Dilution buffer: 5% BSA/TBST.



Peptide Array - Anti-Histone H2A (crotonyl K125) antibody [EP18770] (ab195468)

ab195468 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, can be downloaded **here**.

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