


Product datasheet

Anti-Histone H2A (acetyl K5) antibody [EP856Y] ab45152

Recombinant RabMAb

★★★★☆ [14 Abreviews](#) [11 References](#) [8 Images](#)

Overview

Product name	Anti-Histone H2A (acetyl K5) antibody [EP856Y]
Description	Rabbit monoclonal [EP856Y] to Histone H2A (acetyl K5)
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, ICC/IF, IP
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Caenorhabditis elegans 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	Human breast carcinoma tissue and C6 cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

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. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP856Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab45152 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	★★★★★ (7)	1/100000. Predicted molecular weight: 14 kDa.
IHC-P	★★★★★ (2)	1/250 - 1/2000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF	★★★★★ (3)	1/200 - 1/1000.
IP		1/20.

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.

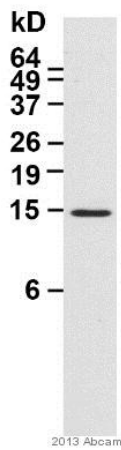
Post-translational modifications

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 (acetyl K5) antibody [EP856Y] (ab45152)

This image is courtesy of an anonymous Abreview

Anti-Histone H2A (acetyl K5) antibody [EP856Y] (ab45152) at 1/1000 dilution (unpurified) + Mouse cortex whole tissue lysate at 20 µg

Secondary

HRP-conjugated Goat anti-rabbit IgG polyclonal at 1/2000 dilution

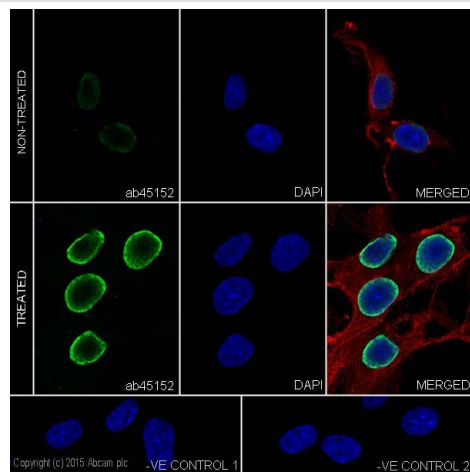
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 14 kDa

Observed band size: 15 kDa

Exposure time: 1 minute

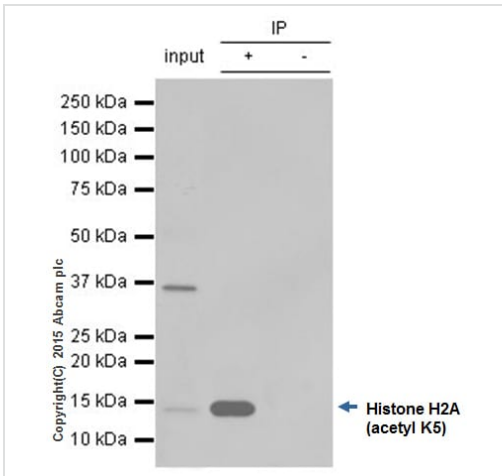


Immunocytochemistry/ Immunofluorescence - Anti-Histone H2A (acetyl K5) antibody [EP856Y] (ab45152)

ab45152 staining Histone H2A (acetyl K5) in C6 (rat glioma) cells, treated and untreated with TSA, 500ng/ml for 4 hours by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% Paraformaldehyde and permeabilized with 0.1% Triton X-100. Samples were incubated with primary antibody at a dilution of 1/200. A goat anti rabbit IgG (Alexa Fluor® 488) (**ab150077**) was used as the secondary antibody. **ab7291** and **ab150120** were used as counterstains for primary antibody **ab75748** and secondary antibody **ab150077** respectively and DAPI was used as a nuclear counterstain.

Negative control 1: Rabbit primary antibody and anti-mouse secondary antibody (**ab150120**)

Negative control 2: Mouse primary antibody (**ab7291**) and anti-rabbit secondary antibody (**ab150077**)



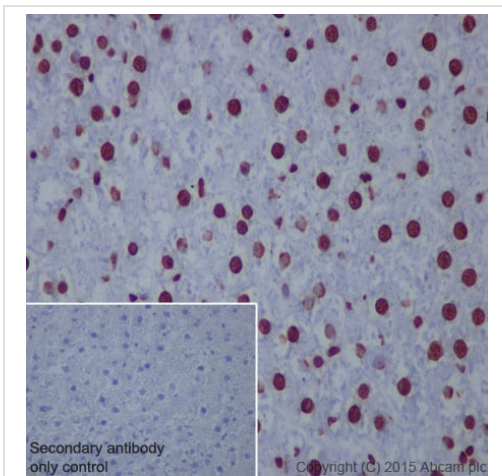
Immunoprecipitation - Anti-Histone H2A (acetyl K5) antibody [EP856Y] (ab45152)

ab45152 immunoprecipitating Histone H2A. 10µg of cell lysate was incubated with primary antibody at a dilution of 1/20 and VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) at a dilution of 1/10000.

Lane 1: Mouse brain whole cell lysate

Lane 2: Mouse brain whole cell lysate

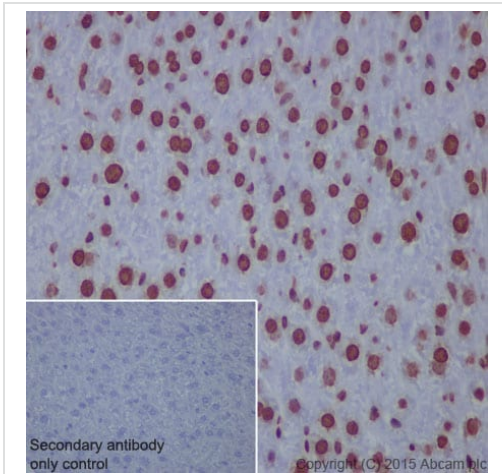
Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab45152 in Mouse brain whole cell lysate



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H2A (acetyl K5) antibody [EP856Y] (ab45152)

ab45152 staining Histone H2A (acetyl K5) in rat liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/2000. A goat anti-rabbit IgG H&L (HRP) [ab97051](#) was used as the secondary antibody at a dilution of 1/500.

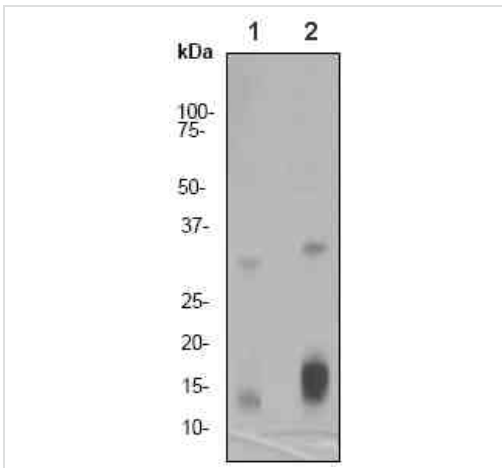
Negative control 1: PBS in place of primary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H2A (acetyl K5) antibody [EP856Y] (ab45152)

ab45152 staining Histone H2A (acetyl K5) in mouse liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/2000. A goat anti-rabbit IgG H&L (HRP) **ab97051** was used as the secondary antibody at a dilution of 1/500.

Negative control 1: PBS in place of primary antibody.



Western blot - Anti-Histone H2A (acetyl K5) antibody [EP856Y] (ab45152)

All lanes : Anti-Histone H2A (acetyl K5) antibody [EP856Y] (ab45152) at 1/100000 dilution (unpurified)

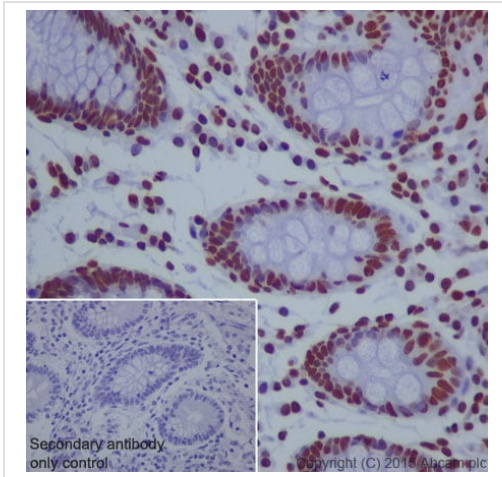
Lane 1 : C6 cell lysate

Lane 2 : C6 + TSA membrane

Predicted band size: 14 kDa

Observed band size: 14 kDa

Additional bands at: 34 kDa. We are unsure as to the identity of these extra bands.







ab45152 staining Histone H2A (acetyl K5) in human colon tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/2000. A goat anti-rabbit IgG H&L (HRP) **ab97051** was used as the secondary antibody at a dilution of 1/500.

Negative control 1: PBS in place of primary antibody.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Histone H2A (acetyl K5) antibody [EP856Y] (ab45152)

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-Histone H2A (acetyl K5) antibody [EP856Y] (ab45152)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors