

Product datasheet

Anti-HDAC1 antibody [EPR460(2)] (Alexa Fluor® 647)  
ab192470

Recombinant RabMAb

2 Images

Overview

<b>Product name</b>	Anti-HDAC1 antibody [EPR460(2)] (Alexa Fluor® 647)
<b>Description</b>	Rabbit monoclonal [EPR460(2)] to HDAC1 (Alexa Fluor® 647)
<b>Host species</b>	Rabbit
<b>Conjugation</b>	Alexa Fluor® 647. Ex: 652nm, Em: 668nm
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rat ▲
<b>Immunogen</b>	Synthetic peptide within Human HDAC1 aa 400 to the C-terminus (C terminal). The exact sequence is proprietary.
<b>Positive control</b>	ICC/IF: HeLa cells. Flow Cyt: HeLa cells.
<b>General notes</b>	<p>Alternative versions available:  <a href="#">Anti-HDAC1 antibody [EPR460(2)] (ab109411)</a> - <b>Knockout validated</b></p> <p>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb® patents</a>.</p> <p>Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or <a href="mailto:outlicensing@thermofisher.com">outlicensing@thermofisher.com</a>.</p> <p>This product is a <a href="#">recombinant rabbit monoclonal antibody</a>.</p>

## Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C. Store In the Dark.
<b>Storage buffer</b>	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 30% Glycerol, PBS, 1% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR460(2)
<b>Isotype</b>	IgG

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab192470** 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
ICC/IF		1/100.
Flow Cyt		Use 0.2µl for 10 <sup>6</sup> cells. <a href="#">ab199093</a> - Rabbit monoclonal IgG (Alexa Fluor® 647), is suitable for use as an isotype control with this antibody.

## Target

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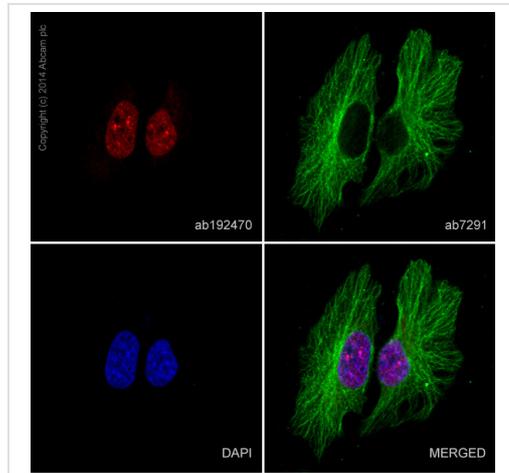
<b>Function</b>	Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events. Histone deacetylases act via the formation of large multiprotein complexes. Deacetylates SP proteins, SP1 and SP3, and regulates their function. Component of the BRG1-RB1-HDAC1 complex, which negatively regulates the CREST-mediated transcription in resting neurons. Upon calcium stimulation, HDAC1 is released from the complex and CREBBP is recruited, which facilitates transcriptional activation. Deacetylates TSHZ3 and regulates its transcriptional repressor activity. Deacetylates 'Lys-310' in RELA and thereby inhibits the transcriptional activity of NF-kappa-B.
<b>Tissue specificity</b>	Ubiquitous, with higher levels in heart, pancreas and testis, and lower levels in kidney and brain.
<b>Sequence similarities</b>	Belongs to the histone deacetylase family. HD type 1 subfamily.
<b>Post-translational modifications</b>	Sumoylated on Lys-444 and Lys-476; which promotes enzymatic activity. Desumoylated by SENP1. Phosphorylation on Ser-421 and Ser-423 promotes enzymatic activity and interactions with NuRD and SIN3 complexes.

Ubiquitinated by CHFR, leading to its degradation by the proteasome.

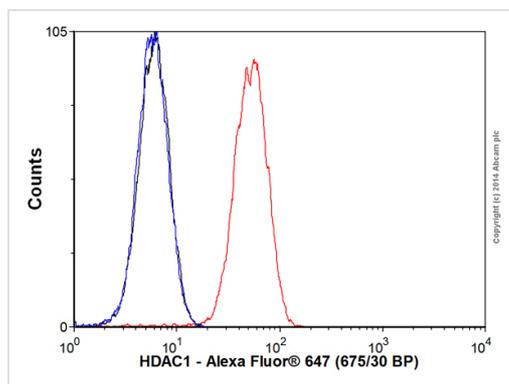
## Cellular localization

Nucleus.

## Images



Immunocytochemistry/ Immunofluorescence - Anti-HDAC1 antibody [EPR460(2)] (Alexa Fluor® 647) (ab192470)



Flow Cytometry - Anti-HDAC1 antibody [EPR460(2)] (Alexa Fluor® 647) (ab192470)

ab192470 staining HDAC1 in HeLa cells. The cells were fixed with 100% methanol (5 min) and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Triton X-100 for 1hr. The cells were then incubated with ab192470 at a working dilution of 1 in 100 (shown in red) and ab7291 (Mouse monoclonal [DM1A] to alpha Tubulin) at 1µg/ml overnight at +4°C, followed by a further incubation at room temperature for 1hr with AlexaFluor® 488 Goat anti-mouse IgG (H&L - preadsorbed) (ab150117) at 2 µg/ml (shown in green). Nuclear DNA was labelled in blue with DAPI.

This product gave a positive signal in 4% formaldehyde (10 min) fixed HeLa cells tested under the same conditions.

Image was taken with a Confocal microscope (Leica-microsystems, TCS SP8).

Overlay histogram showing HeLa cells stained with ab192470 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab192470, 0.2µl/1x10<sup>6</sup> cells) for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (Alexa Fluor® 647) (0.2µl/1x10<sup>6</sup> cells) for 30 min at 22°C. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 25mW red solid state diode laser (635nm) and 675/30 bandpass filter.

This antibody gave a positive signal in HeLa fixed with 4% formaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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

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