abcam

Product datasheet

Anti-ADAR1 antibody [EPR7033] - BSA and Azide free ab240029

KO VALIDATED | Recombinant | RabMAb

4 Images

Overview

Product name	Anti-ADAR1 antibody [EPR7033] - BSA and Azide free
Description	Rabbit monoclonal [EPR7033] to ADAR1 - BSA and Azide free
Host species	Rabbit
Specificity	The immunogen is designed to detect the p150 isoform and not the p110.
Tested applications	**Suitable for:** Flow Cyt, IHC-P, WB **Unsuitable for:** ICC/IF or IP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide within Human ADAR1 aa 200-300. The exact sequence is proprietary. The immunogen used to raise this antibody is designed to detect isoform 1 (p150) and isoforms 2-4. It does not detect Isoform 5 (p110). Database link: P55265
General notes	ab240029 is the carrier-free version of ab126745 This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes. Our carrier-free formats are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency. 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. Ab240029 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm. *Maxpar® is a trademark of Fluidigm Canada Inc.* Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information. 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 production For more information see here.

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

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, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR7033
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab240029** 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
Flow Cyt		Use at an assay dependent concentration. ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Predicted molecular weight: 136 kDa.

Application notes Is unsuitable for ICC/IF or IP.

Target

Function Converts multiple adenosines to inosines and creates I/U mismatched base pairs in double-helical RNA substrates without apparent sequence specificity. Has been found to modify more frequently adenosines in AU-rich regions, probably due to the relative ease of melting A/U base pairs as compared to G/C pairs. Functions to modify viral RNA genomes and may be responsible for hypermutation of certain negative-stranded viruses. Edits the messenger RNAs for glutamate receptor (GLUR) subunits by site-selective adenosine deamination. Produces low-level editing at the GLUR-B Q/R site, but edits efficiently at the R/G site and HOTSPOT1. Binds to short interfering RNAs (siRNA) without editing them and suppresses siRNA-mediated RNA interference. Binds to ILF3/NF90 and up-regulates ILF3-mediated gene expression.

Tissue specificity Ubiquitously expressed, highest levels were found in brain and lung.

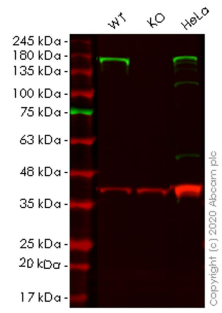
Involvement in disease Defects in ADAR are a cause of dyschromatosis symmetrical hereditaria (DSH) [MIM:127400]; also known as reticulate acropigmentation of Dohi. DSH is a pigmentary genodermatosis of autosomal dominant inheritance characterized by a mixture of hyperpigmented and hypopigmented macules distributed on the dorsal parts of the hands and feet.

Sequence similarities Contains 1 A to I editase domain.
Contains 2 DRADA repeats.
Contains 3 DRBM (double-stranded RNA-binding) domains.

Post-translational modifications Sumoylation reduces RNA-editing activity.

Cellular localization Cytoplasm. Nucleus > nucleolus. Isoform 1 is found predominantly in cytoplasm but appears to shuttle between the cytoplasm and nucleus. Isoform 5 is found exclusively in the nucleolus.

Images



Western blot - Anti-ADAR1 antibody [EPR7033] - BSA and Azide free (ab240029)

All lanes : Anti-ADAR1 antibody [EPR7033] (ab126745) at 1/1000 dilution

Lane 1 : Wild-type HEK293T cell lysate

Lane 2 : ADAR knockout HEK293T cell lysate

Lane 3 : HeLa cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 136 kDa

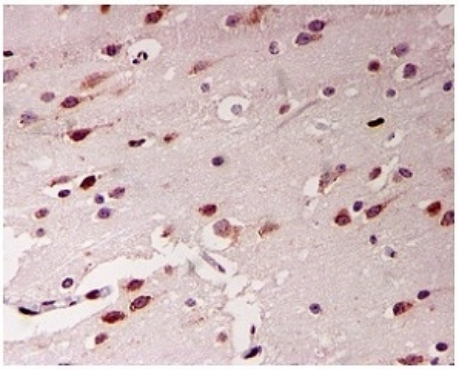
Observed band size: 130 kDa

why is the actual band size different from the predicted?

This data was developed using the same antibody clone in a different buffer formulation (ab126745).

Lanes 1-3: Merged signal (red and green). Green - ab126745 observed at 130 kDa. Red - loading control ab8245 observed at 36 kDa.

ab126745 Anti-ADAR1 antibody [EPR7033] was shown to specifically react with ADAR1 in wild-type HEK293T cells. Loss of signal was observed when knockout cell line ab266846 (knockout cell lysate ab257131) was used. Wild-type and ADAR1 knockout samples were subjected to SDS-PAGE. ab126745 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

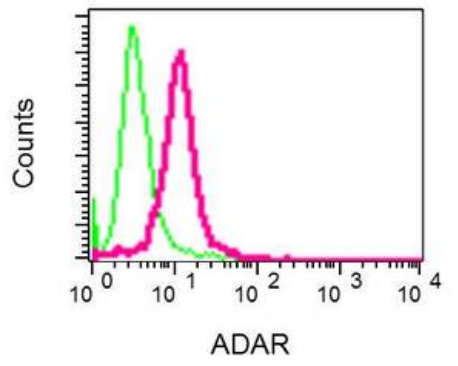


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ADAR1 antibody [EPR7033] - BSA and Azide free (ab240029)

ab126745, at 1/50 dilution, staining ADAR1 in paraffin-embedded Human brain tissue by Immunohistochemistry.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab126745).

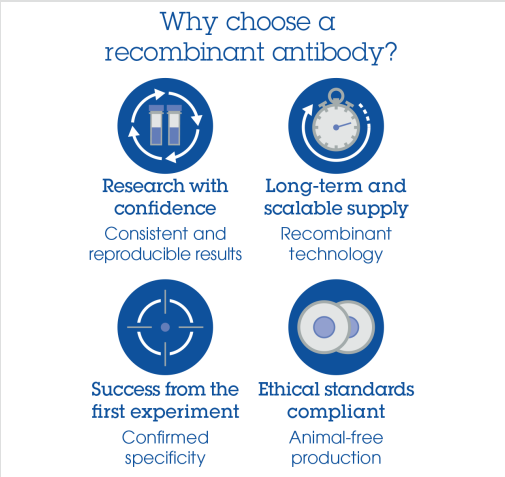
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry - Anti-ADAR1 antibody [EPR7033] - BSA and Azide free (ab240029)

Flow cytometric analysis of permeabilized Ramos cells, staining ADAR1 (red) with ab126745.

$1x10^6$ cells were collected and washed with blocking buffer. Cells were fixed with 2% paraformaldehyde, permeabilized with 1X FACS permeabilizing solution and blocked with blocking buffer for 30 minutes at room temperature. Cells were incubated with primary antibody (1/10) for 30 minutes at room temperature before a fluorescently-conjugated secondary antibody or 30 min at room temperature. A rabbit IgG was used as a negative control (green). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab126745).



Anti-ADAR1 antibody [EPR7033] - BSA and Azide free (ab240029)

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

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