

Product datasheet

Anti-PRAS40 antibody [EPR6263(2)] - BSA and Azide free ab249037

KO VALIDATED Recombinant RabMAB

5 Images

Overview

Product name	Anti-PRAS40 antibody [EPR6263(2)] - BSA and Azide free
Description	Rabbit monoclonal [EPR6263(2)] to PRAS40 - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, Flow Cyt Unsuitable for: ICC/IF
Species reactivity	Reacts with: Mouse, Human
Immunogen	Synthetic peptide within Human PRAS40. The exact sequence is proprietary. Database link: Q96B36
General notes	<p>ab249037 is the carrier-free version of ab151719 This format is designed for use in antibody labeling, including fluorochromes, metal isotopes, oligonucleotides, enzymes.</p> <p>Our carrier-free formats are supplied in a buffer free of BSA, sodium azide and glycerol for higher conjugation efficiency.</p> <p>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.</p> <p>Ab249037 is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm. <i>Maxpar® is a trademark of Fluidigm Canada Inc.</i></p> <p>Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.</p> <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>

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	EPR6263(2)
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab249037** 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		Use at an assay dependent concentration. Detects a band of approximately 40 kDa (predicted molecular weight: 27 kDa).
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
Flow Cyt		Use at an assay dependent concentration.

Application notes

Is unsuitable for ICC/IF.

Target

Function

Subunit of mTORC1, which regulates cell growth and survival in response to nutrient and hormonal signals. mTORC1 is activated in response to growth factors or amino-acids. Growth factor-stimulated mTORC1 activation involves a AKT1-mediated phosphorylation of TSC1-TSC2, which leads to the activation of the RHEB GTPase that potently activates the protein kinase activity of mTORC1. Amino-acid-signaling to mTORC1 requires its relocalization to the lysosomes mediated by the Ragulator complex and the Rag GTPases. Activated mTORC1 up-regulates protein synthesis by phosphorylating key regulators of mRNA translation and ribosome synthesis. mTORC1 phosphorylates EIF4EBP1 and releases it from inhibiting the elongation initiation factor 4E (eiF4E). mTORC1 phosphorylates and activates S6K1 at 'Thr-389', which then promotes protein synthesis by phosphorylating PDCD4 and targeting it for degradation. Within mTORC1, AKT1S1 negatively regulates mTOR activity in a manner that is dependent on its phosphorylation state and binding to 14-3-3 proteins. Inhibits RHEB-GTP-dependent mTORC1 activation. Substrate for AKT1 phosphorylation, but can also be activated by AKT1-independent mechanisms. May also play a role in nerve growth factor-mediated neuroprotection.

Tissue specificity

Widely expressed with highest levels of expression in liver and heart. Expressed at higher levels in cancer cell lines (e.g. A549 and HeLa) than in normal cell lines (e.g. HEK293).

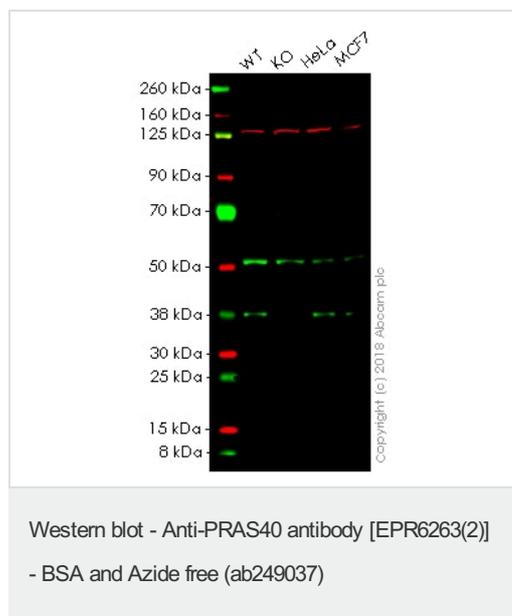
Post-translational modifications

Phosphorylated by AKT1. Phosphorylation relieves inhibitory function on mTORC1.

Cellular localization

Cytoplasm > cytosol. Found in the cytosolic fraction of the brain.

Images



All lanes : Anti-PRAS40 antibody [EPR6263(2)] ([ab151719](#)) at 1/1000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate

Lane 2 : AKT1S1 knockout HAP1 whole cell lysate

Lane 3 : HeLa whole cell lysate

Lane 4 : MCF-7 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 27 kDa

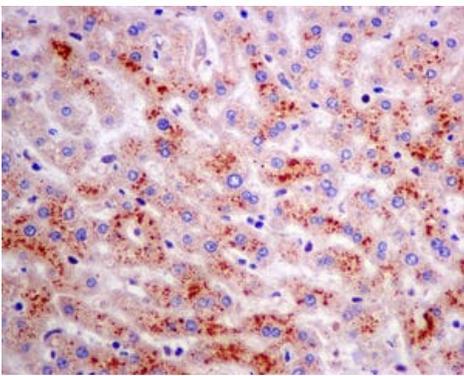
Observed band size: 40 kDa

[why is the actual band size different from the predicted?](#)

This data was developed using [ab151719](#), the same antibody clone in a different buffer formulation.

Lanes 1 - 4: Merged signal (red and green). Green - [ab151719](#) observed at 27 kDa. Red - loading control, [ab130007](#), observed at 124 kDa.

[ab151719](#) was shown to recognize PRAS40 in wild-type HAP1 cells as signal was lost at the expected MW in AKT1S1 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and AKT1S1 knockout samples were subjected to SDS-PAGE. [ab151719](#) and [ab130007](#) (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed [ab216773](#) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed [ab216776](#) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

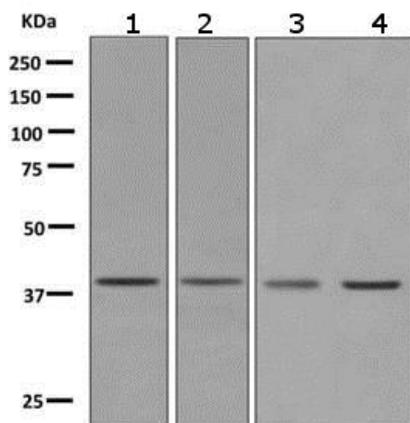


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PRAS40 antibody [EPR6263(2)] - BSA and Azide free (ab249037)

This data was developed using [ab151719](#), the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling PRAS40 with [ab151719](#) at 1/50 dilution.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-PRAS40 antibody [EPR6263(2)] - BSA and Azide free (ab249037)

All lanes : Anti-PRAS40 antibody [EPR6263(2)] ([ab151719](#)) at 1/1000 dilution

Lane 1 : 293T cell lysate

Lane 2 : SHSY5Y cell lysate

Lane 3 : HeLa cell lysate

Lane 4 : NIH 3T3 cell lysate

Lysates/proteins at 10 µg per lane.

Secondary

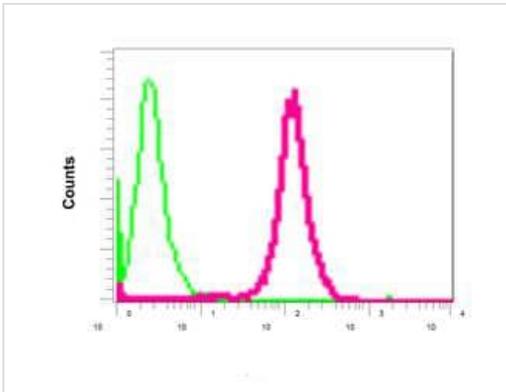
All lanes : Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 27 kDa

Observed band size: 40 kDa [why is the actual band size different](#)

from the predicted?

This data was developed using [ab151719](#), the same antibody clone in a different buffer formulation.



This data was developed using [ab151719](#), the same antibody clone in a different buffer formulation.

Flow cytometric analysis of permeabilized 293T cells labeling PRAS40 with [ab151719](#) at 1/10 dilution (red), compared to a nonspecific control antibody (green).

Flow Cytometry - Anti-PRAS40 antibody
[EPR6263(2)] - BSA and Azide free (ab249037)

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-PRAS40 antibody [EPR6263(2)] - BSA and Azide free (ab249037)

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