

## Product datasheet

# Anti-TRP1 antibody [EPR21960] ab235447

Recombinant RabMAb

★★★★★ 2 Abreviews 1 References 10 Images

### Overview

<b>Product name</b>	Anti-TRP1 antibody [EPR21960]
<b>Description</b>	Rabbit monoclonal [EPR21960] to TRP1
<b>Host species</b>	Rabbit
<b>Specificity</b>	We recommend WB for human and mouse; we predict it will also work in WB with rat lysates but were unable to test this.
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P, ICC/IF, Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Recombinant fragment within Human TRP1 aa 1-450. The exact sequence is proprietary. Database link: <a href="#">P17643</a>
<b>Positive control</b>	IHC-P: Human skin and melanoma tissues; Mouse and rat skin tissues. WB: MeWo and B16-F0 whole cell lysates. ICC/IF: MeWo and B16-F0 cells. Flow Cyt: MeWo and B16-F0 cells.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications &amp; species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise<sup>™</sup> guarantee.</p> <p>In preparation for this, we have started to update the applications &amp; species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications &amp; species that this product has been "predicted to work</p>

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

<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 long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR21960
<b>Isotype</b>	IgG

## Applications

Our [Abpromise guarantee](#) covers the use of **ab235447** 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 75 kDa (predicted molecular weight: 61 kDa). We recommend WB for human and mouse; we predict it will also work in WB with rat lysates but were unable to test this.
IHC-P	★★★★★	1/4000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF	★★★★★	1/1000.
Flow Cyt		1/60.

## Target

<b>Function</b>	Oxidation of 5,6-dihydroxyindole-2-carboxylic acid (DHICA) into indole-5,6-quinone-2-carboxylic acid. May regulate or influence the type of melanin synthesized.
<b>Tissue specificity</b>	Pigment cells.
<b>Pathway</b>	Pigment biosynthesis; melanin biosynthesis.

## Involvement in disease

Defects in TYRP1 are the cause of albinism oculocutaneous type 3 (OCA3) [MIM:203290]; also known as Rufous oculocutaneous albinism. An autosomal recessive disorder in which the biosynthesis of melanin pigment is reduced in skin, hair, and eyes. Tyrosinase activity is normal and patients have only moderate reduction of pigment. The eyes present red reflex on transillumination of the iris, dilution of color of iris, nystagmus and strabismus. Darker-skinned individuals have bright copper-red coloration of the skin and hair.

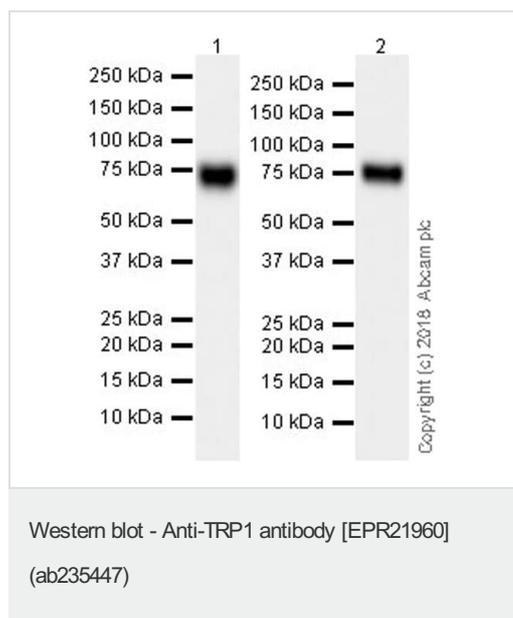
## Sequence similarities

Belongs to the tyrosinase family.

## Cellular localization

Melanosome membrane.

## Images



**All lanes :** Anti-TRP1 antibody [EPR21960] (ab235447) at 1/1000 dilution

**Lane 1 :** MeWo (human malignant melanoma fibroblast cell line) whole cell lysate

**Lane 2 :** B16-F0 (mouse melanoma epithelial cell-like cell line) whole cell lysate

Lysates/proteins at 20 µg per lane.

### Secondary

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

**Lane 2 :** Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size:** 61 kDa

**Observed band size:** 75 kDa

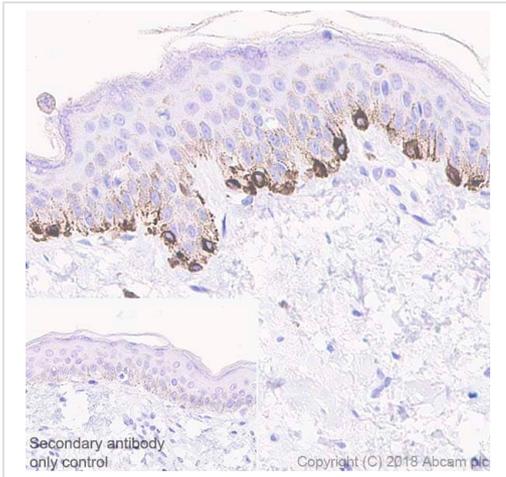
[why is the actual band size different from the predicted?](#)

**Exposure time:** Lane 1: 10 seconds; Lane 2: 3 seconds.

**Blocking/Dilution buffer:** 5% NFDM/TBST.

The observed mass is greater than the predicted due to glycosylation.

The molecular mass observed is consistent with what has been described in the literature (PMID: 21324755; PMID: 18042623;18650849).

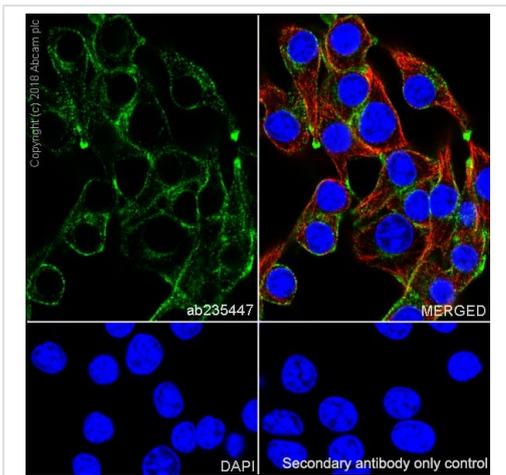


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRP1 antibody [EPR21960] (ab235447)

Immunohistochemical analysis of paraffin-embedded human skin tissue labeling TRP1 with ab235447 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining of melanocytes in human skin (PMID:21562572). Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

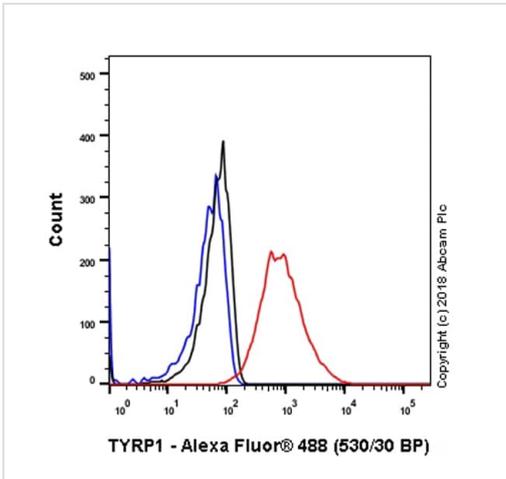


Immunocytochemistry/ Immunofluorescence - Anti-TRP1 antibody [EPR21960] (ab235447)

Immunofluorescent analysis of 100% methanol fixed B16-F0 (mouse melanoma epithelial cell-like cell line) cells labeling TRP1 with ab235447 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor<sup>®</sup> 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic and membranous staining in the B16-F0 cell line.

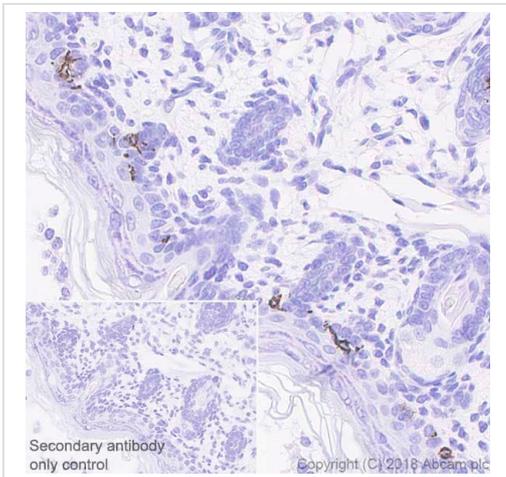
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor<sup>®</sup> 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor<sup>®</sup> 488) (ab150077) secondary antibody at 1/1000 dilution.



Flow Cytometry - Anti-TRP1 antibody [EPR21960] (ab235447)

Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized B16-F0 (mouse melanoma epithelial cell-like cell line) cells labeling TRP1 with ab235447 at 1/60 (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells incubated with secondary antibody only) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.

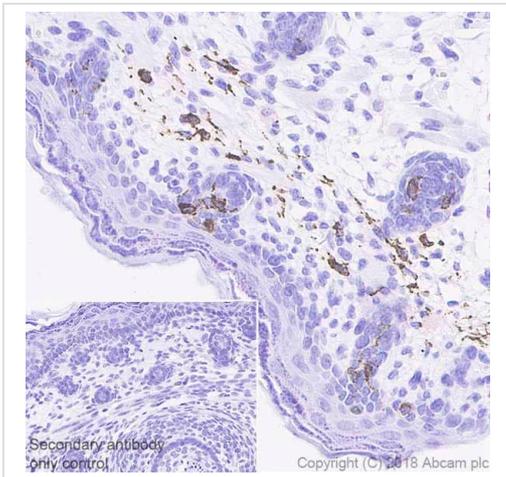


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRP1 antibody [EPR21960] (ab235447)

Immunohistochemical analysis of paraffin-embedded rat skin tissue labeling TRP1 with ab235447 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining of melanocytes in rat skin (PMID: 21562572). Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

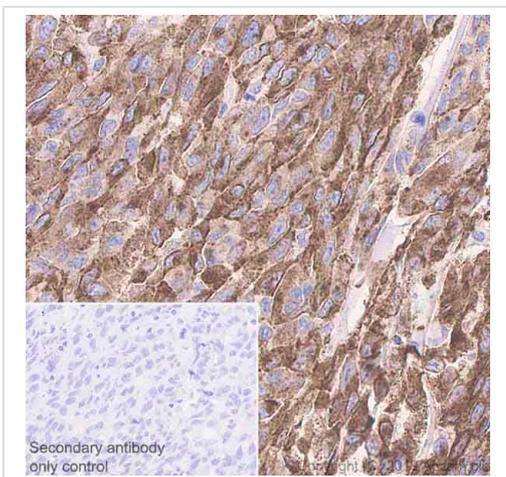


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRP1 antibody [EPR21960] (ab235447)

Immunohistochemical analysis of paraffin-embedded mouse skin tissue labeling TRP1 with ab235447 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining of melanocytes in mouse skin (PMID: 21562572). Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

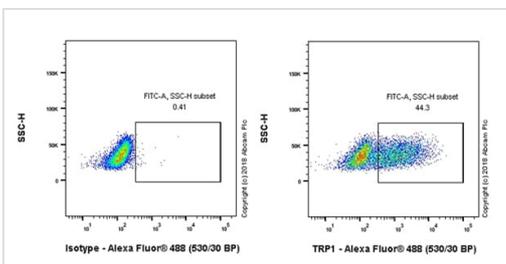


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRP1 antibody [EPR21960] (ab235447)

Immunohistochemical analysis of paraffin-embedded human melanoma tissue labeling TRP1 with ab235447 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining in tumor cells of human melanoma (PMID: 22045183; 26068396). Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

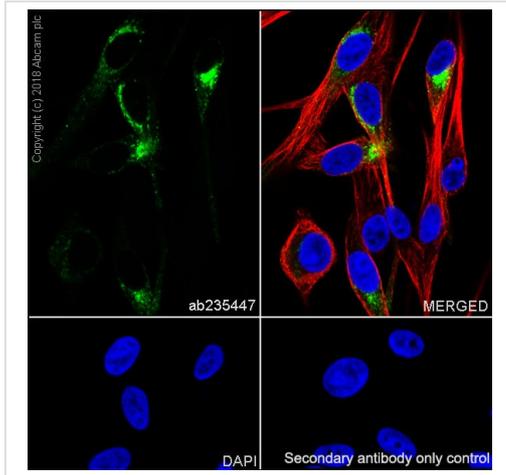
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry - Anti-TRP1 antibody [EPR21960] (ab235447)

Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized MeWo (human malignant melanoma fibroblast cell line) cells labeling TRP1 with ab235447 at 1/60 (right panel) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (left panel). Goat Anti-Rabbit IgG H&L (Alexa Fluor<sup>®</sup> 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.

TRP1 is predominantly expressed in mature melanosomes (PMID: 27073483, 11266471).



Immunocytochemistry/ Immunofluorescence - Anti-TRP1 antibody [EPR21960] (ab235447)

Immunofluorescent analysis of 100% methanol fixed MeWo (human malignant melanoma fibroblast cell line) cells labeling TRP1 with ab235447 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining in MeWo cell line.

The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

Why choose a recombinant antibody?

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

Anti-TRP1 antibody [EPR21960] (ab235447)

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

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