abcam

ab178676

Anti-TRP1 antibody [EPR13063]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR13063
Purification technique	Affinity purification Protein A
Concentration	0.365 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/10000 - 1/50000
Notes	-

Species	Human

Dilution info	1/10000 - 1/50000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/100 - 1/250
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/40
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/1000

Notes	For the unpurified format use at 1/100 - 1/250 dilution. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information TYRP1

Function	Plays a role in melanin biosynthesis (PubMed:16704458, PubMed:22556244, PubMed:23504663). Catalyzes the oxidation of 5,6-dihydroxyindole-2-carboxylic acid (DHICA) into indole-5,6-quinone-2-carboxylic acid in the presence of bound Cu(2+) ions, but not in the presence of Zn(2+) (PubMed:28661582). May regulate or influence the type of melanin synthesized (PubMed:16704458, PubMed:22556244). Also to a lower extent, capable of hydroxylating tyrosine and producing melanin (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Species reactivity
Rat: We have preliminary internal testing data to indicate this antibody may not react with this species.
Please contact us for more information.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	TRP1 (Tyrosinase-related protein 1) also known as gp75 is a copper-binding protein involved in melanin biosynthesis. TRP1 has a molecular mass of approximately 75 kDa. It is expressed mainly in melanocytes and retinal pigment epithelium cells where it contributes to pigmentation processes. TRP1 functions as an oxidase enzyme catalyzing steps in the transformation of dopa to melanin a pigment responsible for coloration in skin hair and eyes.
Biological function summary	TRP1 participates in a protein complex known as the melanosome. In this complex it plays a role in the proper polymerization and stabilization of eumelanin one type of melanin. It influences the quality and quantity of melanin produced affecting pigmentation. TRP1’s interaction with other tyrosinase family members like tyrosinase and TRP2 is important in maintaining the complex's integrity and function with each member contributing uniquely to the melanogenesis process.
Pathways	TRP1 operates within the melanogenesis and WNT signaling pathways. In the melanogenesis pathway TRP1 works alongside tyrosinase for the production of melanin pigment. The WNT signaling pathway which is significant for cellular differentiation and proliferation connects TRP1 through regulatory networks that influence melanocyte development and pigmentation. Regulation of TRP1 and these proteins ensures proper melanin synthesis impacting pigmentation processes in the organism.
Associated diseases and disorders	TRP1 has connections to conditions such as albinism and melanoma. In albinism mutations in TRP1 can lead to reduced melanin production causing pigmentation defects. TRP1's altered expression has been linked to melanoma a type of skin cancer highlighting its role in melanin regulation and tumor biology. The relationship between TRP1 and tyrosinase in diseases like melanoma highlights the significance of their interaction in both normal pigmentation and disease progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

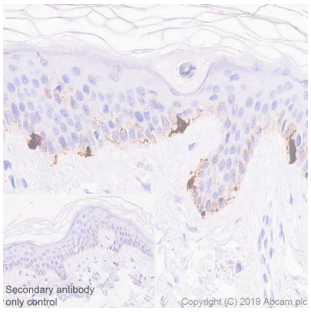
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

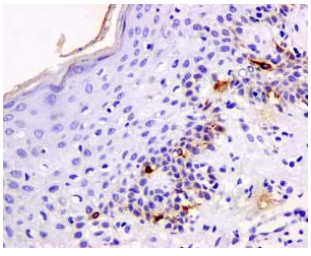
9 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRP1 antibody [EPR13063] (ab178676)

TRP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TRP1 antibody

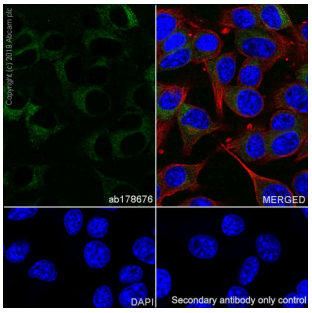
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human skin tissue sections labeling TRP1 with purified ab178676 at 1:1000 dilution (0.36 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRP1 antibody [EPR13063] (ab178676)

TRP1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TRP1 antibody

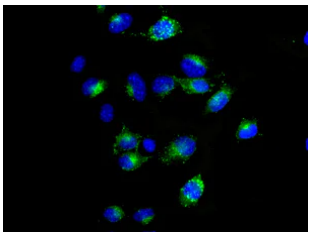
Immunohistochemical analysis of paraffin-embedded Human skin tissue labeling TRP1 with ab178676 (unpurified) at 1/100 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-TRP1 antibody [EPR13063] (ab178676)

TRP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-TRP1 antibody

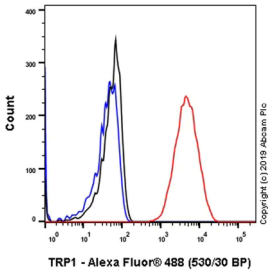
Immunocytochemistry/ Immunofluorescence analysis of B16-F10 (Mouse melanoma epithelial cell-like) cells labeling TRP1 with purified ab178676 at 1:100 dilution (3.6 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunocytochemistry/ Immunofluorescence - Anti-TRP1 antibody [EPR13063] (ab178676)

TRP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-TRP1 antibody

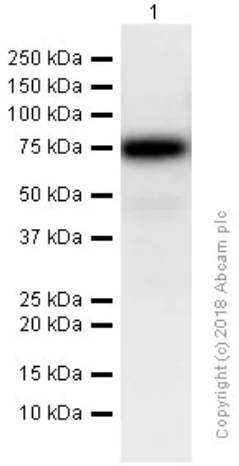
Immunofluorescent analysis of B16-F0 cells labeling TRP1 with ab178676 (unpurified) at 1/100 dilution.



Flow Cytometry (Intracellular) - Anti-TRP1 antibody [EPR13063] (ab178676)

TRP1 Flow Cytometry (Intracellular) staining using rabbit Anti-TRP1 antibody

Intracellular Flow Cytometry analysis of B16-F0 (Mouse melanoma epithelial cell-like) cells labeling TRP1 with purified ab178676 at 1/40 dilution (10 µg/ml) (red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-TRP1 antibody [EPR13063] (ab178676)

The observed molecular weight is consistent with what have been described in literatures PMID: 24586946 and 27690000.
All lanes:
Western blot - Anti-TRP1 antibody [EPR13063] (ab178676) at 1/10000 dilution

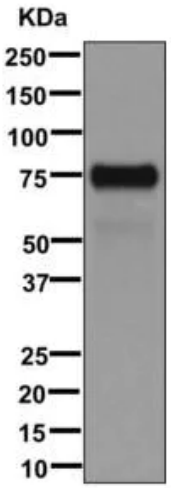
All lanes:
SK-MEL-28 (Human malignant melanoma) whole cell lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 61 kDa

Observed band size: 75 kDa

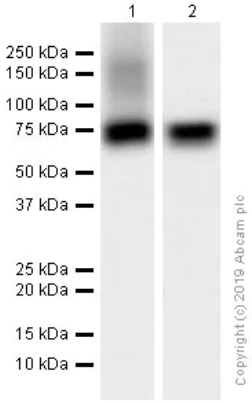


Western blot - Anti-TRP1 antibody [EPR13063] (ab178676)

All lanes:
Western blot - Anti-TRP1 antibody [EPR13063] (ab178676) at 1/10000 dilution

All lanes:
Human melanoma lysate at 10 µg

Predicted band size: 61 kDa



Western blot - Anti-TRP1 antibody [EPR13063] (ab178676)

The observed molecular weight is consistent with what have been described in literatures PMID: 24586946 and 27690000.
All lanes:
Western blot - Anti-TRP1 antibody [EPR13063] (ab178676) at 1/50000 dilution

Lane 1:
MeWo (Human malignant melanoma fibroblast) whole cell lysates at 20 µg

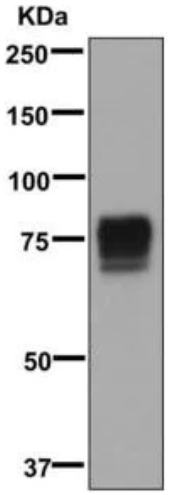
Lane 2:
B16-F0 (Mouse melanoma epithelial cell-like) whole cell lysates at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 61 kDa

Observed band size: 75 kDa



Western blot - Anti-TRP1 antibody [EPR13063] (ab178676)

All lanes:
Western blot - Anti-TRP1 antibody [EPR13063] (ab178676) at 1/10000 dilution

All lanes:
B16-F0 cell lysate at 10 µg

Predicted band size: 35 kDa, 61 kDa, 64 kDa

Observed band size: 39 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.