abcam

ab190709

Anti-TRP1 antibody [TA99]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing TYRP1 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P17643
Clone number	TA99
Purification technique	Affinity purification Protein A/G
Light chain type	kappa
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

Species	Mouse
Dilution info	-
Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Species	Human
Dilution info	-
Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

IHC-P

Expected

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

ICC/IF

Expected

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

IHC-Fr

Expected

Species	Mouse, Human
Dilution info	Use at an assay dependent concentration.
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	Blue Ice
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

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.

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

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