

TRP1 (A-20): sc-10446

BACKGROUND

Tyrosinase (TYR), a type I membrane protein and copper-containing enzyme, is involved in the production of melanin, the primary pigment found in vertebrates. Melanin biogenesis requires the enzymatic activity of TYR, which catalyzes the critical and rate-limiting step of tyrosine hydroxylation in the biosynthesis of melanin. Defects effecting TYR activity result in various forms of albinism. The TYR-related proteins, TRP1 and TRP2, are also specifically expressed in melanocytes, and they likewise contribute to the synthesis of melanin within the melanosomes. The TRPs, including TYR, all share a similar transmembrane region, contain two metal-binding regions and a cysteine-rich epidermal growth factor motif, and are localized in the melanosomal membrane. These proteins, however, have distinct catalytic activity, and they individually contribute to the biosynthesis of melanin biopolymers. The TRPs are believed to exist as a multi-enzyme complex, as these proteins form aggregates together, and the expression of TRP1 also helps stabilize TYR in melanocytes.

CHROMOSOMAL LOCATION

Genetic locus: *Typr1* (mouse) mapping to 4 C3.

SOURCE

TRP1 (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TRP1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10446 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as phycoerythrin conjugate for flow cytometry, sc-10446 PE, 100 tests.

Available as Alexa Fluor[®] 405 (sc-10446 AF405), Alexa Fluor[®] 488 (sc-10446 AF488) or Alexa Fluor[®] 647 (sc-10446 AF647) conjugates for flow cytometry or immunofluorescence; 100 µg/2 ml.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

TRP1 (A-20) is recommended for detection of TRP1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TRP1 siRNA (m): sc-36744, TRP1 shRNA Plasmid (m): sc-36744-SH and TRP1 shRNA (m) Lentiviral Particles: sc-36744-V.

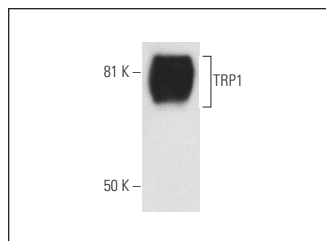
Molecular Weight of TRP1: 70-90 kDa.

Positive Controls: B16-FO cell lysate: sc-2298 or KNRK whole cell lysate: sc-2214.

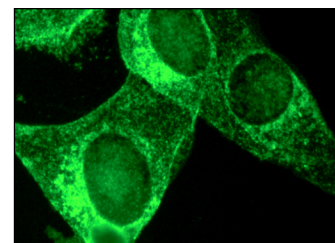
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



TRP1 (A-20): sc-10446. Western blot analysis of TRP1 expression in B16-FO whole cell lysate.



TRP1 (A-20): sc-10446. Immunofluorescence staining of methanol-fixed B16-FO cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Huijbers, I.J., et al. 2006. An inducible mouse model of melanoma expressing a defined tumor antigen. *Cancer Res.* 66: 3278-3286.
- van Schanke, A., et al. 2006. Induction of nevi and skin tumors in *Ink4a*/*Arf* Xpa knockout mice by neonatal, intermittent, or chronic UVB exposures. *Cancer Res.* 66: 2608-2615.
- Kwak, Y.J., et al. 2011. Fermented *Viola mandshurica* inhibits melanogenesis in B16 melanoma cells. *Biosci. Biotechnol. Biochem.* 75: 841-847.
- Sekine, Y., et al. 2015. STAP-2 protein expression in B16F10 melanoma cells positively regulates protein levels of tyrosinase, which determines organs to infiltrate in the body. *J. Biol. Chem.* 290: 17462-17473.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **TRP1 (G-9): sc-166857** or **TRP1 (B-2): sc-514900**, our highly recommended monoclonal alternatives to TRP1 (A-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **TRP1 (G-9): sc-166857**.