

TRP2 (D-18): sc-10451

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: DCT (human) mapping to 13q11.2; Dct (mouse) mapping to 14 E4.

SOURCE

TRP2 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TRP2 of human 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-10451 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TRP2 (D-18) is recommended for detection of TRP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

TRP2 (D-18) is also recommended for detection of TRP2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TRP2 siRNA (h): sc-41661, TRP2 siRNA (m): sc-41662, TRP2 shRNA Plasmid (h): sc-41661-SH, TRP2 shRNA Plasmid (m): sc-41662-SH, TRP2 shRNA (h) Lentiviral Particles: sc-41661-V and TRP2 shRNA (m) Lentiviral Particles: sc-41662-V.

Molecular Weight of TRP2 precursor: 59 kDa.

Molecular Weight of glycosylated TRP2: 75 kDa.

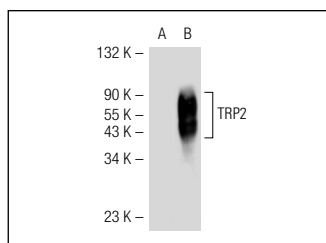
STORAGE

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

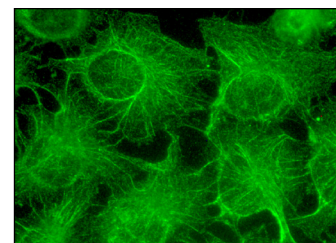
RESEARCH USE

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

DATA



TRP2 (D-18): sc-10451. Western blot analysis of TRP2 expression in non-transfected: sc-117752 (A) and human TRP2 transfected: sc-113802 (B) 293T whole cell lysates.



TRP2 (D-18): sc-10451. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Nakamura, K., et al. 2003. Down-regulation of melanin synthesis by a biphenyl derivative and its mechanism. *Pigment Cell Res.* 16: 494-500.
- Huang, Y.H., et al. 2008. Anemonin is a natural bioactive compound that can regulate tyrosinase-related proteins and mRNA in human melanocytes. *J. Dermatol. Sci.* 49: 115-123.
- Bellei, B., et al. 2010. P38 regulates pigmentation via proteasomal degradation of tyrosinase. *J. Biol. Chem.* 285: 7288-7299.
- Freter, R., et al. 2010. Adult stem cells exhibit global suppression of RNA polymerase II serine-2 phosphorylation. *Stem Cells* 28: 1571-1580.
- Hariharan, V., et al. 2010. Monobenzyl ether of hydroquinone and 4-tertiary butyl phenol activate markedly different physiological responses in melanocytes: relevance to skin depigmentation. *J. Invest. Dermatol.* 130: 211-220.
- Bellei, B., et al. 2011. Wnt/ β -catenin signaling is stimulated by α -melanocyte-stimulating hormone in melanoma and melanocyte cells: implication in cell differentiation. *Pigment Cell Melanoma Res.* 24: 309-325.
- Kwak, Y.J., et al. 2011. Fermented *Viola mandshurica* inhibits melanogenesis in B16 melanoma cells. *Biosci. Biotechnol. Biochem.* 75: 841-847.
- Huang, H.C., et al. 2011. Inhibitory effect of [6]-gingerol on melanogenesis in B16F10 melanoma cells and a possible mechanism of action. *Biosci. Biotechnol. Biochem.* 75: 1067-1072.



Try **TRP2 (C-9): sc-74439** or **TRP2 (E-10): sc-166716**, our highly recommended monoclonal alternatives to TRP2 (D-18). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **TRP2 (C-9): sc-74439**.