

Rho T1 (A-16): sc-102083

BACKGROUND

The Rho subfamily of Ras-related GTPases controls multiple aspects of cell function, including cytoskeletal rearrangement, nuclear signaling and cell growth. Rho T1 (Ras homolog gene family, member T1), also known as ARHT1 or MIRO-1 (mitochondrial Rho GTPase 1), is an evolutionarily conserved member of the mitochondrial Rho GTPase family of proteins. Localizing to the mitochondrion, Rho T1 is widely expressed with predominant expression in skeletal muscle and heart. Rho T1 is a single-pass type IV membrane protein with two EF-hand domains and two GTPase domains (one at the N-terminus and one at the C-terminus). It is believed to play a role in the regulation of mitochondrial homeostasis and specifically binds to the Kinesin-interacting proteins GRIF-1 and OIP106. Mutations in the gene encoding Rho T1 result in aggregation of the mitochondria. This suggests a potential role for Rho T1 in mitochondrial trafficking.

REFERENCES

1. Fransson, A., et al. 2003. Atypical Rho GTPases have roles in mitochondrial homeostasis and apoptosis. *J. Biol. Chem.* 278: 6495-6502.
2. Aspenström, P., et al. 2004. Rho GTPases have diverse effects on the organization of the actin filament system. *Biochem. J.* 377: 327-337.

CHROMOSOMAL LOCATION

Genetic locus: RHOT1 (human) mapping to 17q11.2; Rhot1 (mouse) mapping to 11 B5.

SOURCE

Rho T1 (A-16) is a purified rabbit polyclonal antibody raised against Rho T1 of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and <0.02% sucrose.

APPLICATIONS

Rho T1 (A-16) is recommended for detection of Rho T1 of mouse, human and dog 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Rho T1 siRNA (h): sc-93809, Rho T1 siRNA (m): sc-152856, Rho T1 shRNA Plasmid (h): sc-93809-SH, Rho T1 shRNA Plasmid (m): sc-152856-SH, Rho T1 shRNA (h) Lentiviral Particles: sc-93809-V and Rho T1 shRNA (m) Lentiviral Particles: sc-152856-V.

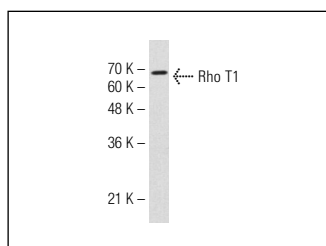
Molecular Weight of Rho T1: 71 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or HeLa nuclear extract: sc-2120.

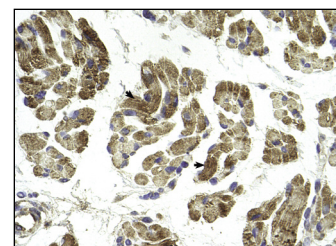
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Rho T1 (B-20): sc-102083. Western blot analysis of Rho T1 expression in Hep G2 whole cell lysate.



Rho T1 (A-16): sc-102083. Immunoperoxidase staining of formalin fixed, paraffin-embedded human muscle tissue showing cytoplasmic staining.

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.

PROTOCOLS

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



Try **Rho T1 (A-8): sc-398520** or **Rho T1 (EB-06): sc-81935**, our highly recommended monoclonal alternatives to Rho T1 (A-16).