

Rho T1 (P-12): sc-132431

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

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4. Guo, X., et al. 2005. The GTPase dMiro is required for axonal transport of mitochondria to *Drosophila* synapses. *Neuron* 47: 379-393.
5. Fransson, S., et al. 2006. The atypical Rho GTPases Miro-1 and Miro-2 have essential roles in mitochondrial trafficking. *Biochem. Biophys. Res. Commun.* 344: 500-510.
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CHROMOSOMAL LOCATION

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

SOURCE

Rho T1 (P-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Rho T1 of human origin.

RESEARCH USE

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

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-132431 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rho T1 (P-12) is recommended for detection of Rho T1 isoforms 1, 2, 3, 4, 5 and 6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Rho family members.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.


 MONOS
 Satisfation
 Guaranteed

Try **Rho T1 (A-8): sc-398520** or **Rho T1 (EB-06): sc-81935**, our highly recommended monoclonal alternatives to Rho T1 (P-12).