SANTA CRUZ BIOTECHNOLOGY, INC.

Rho T1 (EB-06): sc-81935

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The Power to Question

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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CHROMOSOMAL LOCATION

Genetic locus: RHOT1 (human) mapping to 17q11.2.

SOURCE

Rho T1 (EB-06) is a mouse monoclonal antibody raised against recombinant Rho T1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Rho T1 (EB-06) is recommended for detection of Rho T1 of human 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)] 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 shRNA Plasmid (h): sc-93809-SH and Rho T1 shRNA (h) Lentiviral Particles: sc-93809-V.

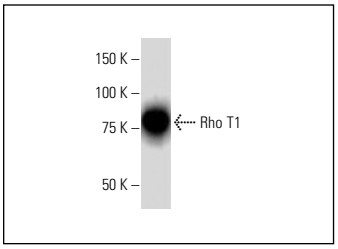
Molecular Weight of Rho T1: 71 kDa.

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

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Rho T1 (EB-06): sc-81935. Western blot analysis of Rho T1 expression in HeLa nuclear extract.

SELECT PRODUCT CITATIONS

1. Wang, Q., Tian, J., Chen, H., Du, H. and Guo, L. 2019. Amyloid β-mediated KIF5A deficiency disrupts anterograde axonal mitochondrial movement. Neurobiol. Dis. 127: 410-418.

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.