

Rhotekin 2 (M-14): sc-161189

BACKGROUND

Rho, the Ras-related small GTPase, is responsible for the regulation of Actin-based cytoskeletal structures including stress fibers, focal adhesions and the contractile ring apparatus. Rho proteins function as molecular switches that are able to turn cytokinesis on and off. Although little is known about signaling downstream of Rho, a host of putative Rho effector proteins have been described, including rhotillin, Rhotekin, citron and the serine/threonine kinase, protein kinase N. Rhotekin 2, also known as PLEKHK1 (Pleckstrin homology domain-containing family K member 1), is a 609 amino acid protein that is expressed in bone marrow-derived cells, lymphocytes and CD4 positive T-cells. Due to this expression pattern, it is likely that Rhotekin 2 participates in lymphopoiesis. Rhotekin 2 contains one PH domain, a motif that is present in a variety of proteins that are involved in intracellular signaling. There are three isoforms of Rhotekin that are produced as a result of alternative splicing events.

REFERENCES

1. Reid, T., et al. 1996. Rhotekin, a new putative target for Rho bearing homology to a serine/threonine kinase, PKN, and rhotillin in the Rho-binding domain. *J. Biol. Chem.* 271: 13556-13560.
2. Collier, F.M., et al. 2004. Identification and characterization of a lymphocytic Rho-GTPase effector: rhotekin-2. *Biochem. Biophys. Res. Commun.* 324: 1360-1369.
3. Chen, D., et al. 2004. Bone morphogenetic proteins. *Growth Factors* 22: 233-241.
4. Gregorio-King, C.C., et al. 2004. Mechanisms of resistance to the cytotoxic effects of oxysterols in human leukemic cells. *J. Steroid Biochem. Mol. Biol.* 88: 311-320.
5. Ito, H., et al. 2006. Possible interaction of a Rho effector, Rhotekin, with a PDZ-protein, PIST, at synapses of hippocampal neurons. *Neurosci. Res.* 56: 165-171.

CHROMOSOMAL LOCATION

Genetic locus: RTKN2 (human) mapping to 10q21.2; Rtkn2 (mouse) mapping to 10 B5.1.

SOURCE

Rhotekin 2 (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rhotekin 2 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-161189 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Rhotekin 2 (M-14) is recommended for detection of Rhotekin 2 of mouse, rat and 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)], 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 Rhotekin.

Suitable for use as control antibody for Rhotekin 2 siRNA (h): sc-90523, Rhotekin 2 siRNA (m): sc-152861, Rhotekin 2 shRNA Plasmid (h): sc-90523-SH, Rhotekin 2 shRNA Plasmid (m): sc-152861-SH, Rhotekin 2 shRNA (h) Lentiviral Particles: sc-90523-V and Rhotekin 2 shRNA (m) Lentiviral Particles: sc-152861-V.

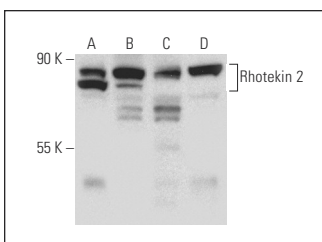
Molecular Weight of Rhotekin 2: 69 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, COLO 320DM cell lysate: sc-2226 or SK-BR-3 cell lysate: sc-2218.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Rhotekin 2 (M-14): sc-161189. Western blot analysis of Rhotekin 2 expression in WI 38 (A), MIA PaCa-2 (B), COLO 320DM (C) and SK-BR-3 (D) whole cell lysates.

STORAGE

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

MONOS
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Try **Rhotekin 2 (2C2): sc-517159**, our highly recommended monoclonal alternative to Rhotekin 2 (M-14).