SANTA CRUZ BIOTECHNOLOGY, INC.

PDZ-RhoGEF (20): sc-136469

BACKGROUND

The multidomain (RGS)-containing RhoGEFs represent a family of guanine nucleotide exchange factors that stabilize the nucelotide-free state of small GTPases through their DH/PH domains, leading to the exchange of GDP to GTP. Uniquely, PDZ-RhoGEF, also known as Rho guanine nucleotide exchange factor 11 and ARHGEF11, binds tightly to both nucleotide-free and activated Rho A, therefore playing a role as a primary regulator of Rho A. Mutations within the carboxylate-binding loop of PDZ-RhoGEF result in changes in cell morphology and Actin organization which is likely due to its interaction with MAP-1A (MAP1 light chain LC2). PDZ-RhoGEF also plays a role in B plexin mediated activation of Rho/Rho kinase signaling, which is implicated in the regulation of axon guidance and cell migration.

REFERENCES

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7. Longhurst, D.M., et al. 2006. Interaction of PDZRhoGEF with microtubule-associated protein 1 light chains: link between microtubules, Actin cytoskeleton, and neuronal polarity. J. Biol. Chem. 281: 12030-12040.
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CHROMOSOMAL LOCATION

Genetic locus: ARHGEF11 (human) mapping to 1q23.1; Arhgef11 (mouse) mapping to 3 F1.

SOURCE

PDZ-RhoGEF (20) is a mouse monoclonal antibody raised against amino acids 147-269 of PDZ-RhoGEF of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PDZ-RhoGEF (20) is available conjugated to agarose (sc-136469 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; and to HRP (sc-136469 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

PDZ-RhoGEF (20) is recommended for detection of PDZ-RhoGEF 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)].

Suitable for use as control antibody for PDZ-RhoGEF siRNA (h): sc-45823, PDZ-RhoGEF siRNA (m): sc-45824, PDZ-RhoGEF shRNA Plasmid (h): sc-45823-SH, PDZ-RhoGEF shRNA Plasmid (m): sc-45824-SH, PDZ-RhoGEF shRNA (h) Lentiviral Particles: sc-45823-V and PDZ-RhoGEF shRNA (m) Lentiviral Particles: sc-45824-V.

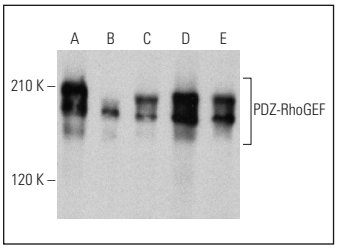
Molecular Weight of PDZ-RhoGEF: 183 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, L8 cell lysate: sc-3807 or RAT2 whole cell lysate: sc-364198.

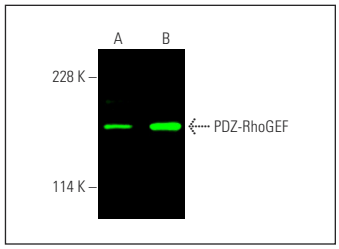
RECOMMENDED SUPPORT REAGENTS

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



PDZ-RhoGEF (20): sc-136469. Western blot analysis of PDZ-RhoGEF expression in KNRK (**A**), L8 (**B**), A-10 (**C**), RAT2 (**D**) and RPE-J (**E**) whole cell lysates.



PDZ-RhoGEF (20): sc-136469. Near-infrared western blot analysis of PDZ-RhoGEF expression in KNRK (**A**) and RAT2 (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

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. Not for resale.