SANTA CRUZ BIOTECHNOLOGY, INC.

PDZ-GEF1 (T-14): sc-168920

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PDZ-GEF1 (PDZ domain-containing guanine nucleotide exchange factor 1), also known as RAPGEF2 (Rap guanine nucleotide exchange factor (GEF) 2), nRap GEP (neural RAP guanine nucleotide exchange protein), RA-GEF, NRAPGEP, Rap-GEP or CNrasGEF, is a 1,499 amino acid cell membrane protein that functions as a guanine nucleotide exchange factor for Rap 1A, Rap 1B and Rap 2B GTPases. Expressed at highest levels in brain, PDZ-GEF1 is found at low levels in placenta, heart, lung and kidney, and undergoes post-translational phosphorylation following DNA damage. PDZ-GEF1 interacts with MAGI-2 and contains one Ras-GEF domain, a Ras-associating domain, one PDZ (DHR) domain, a single N-terminal Ras-GEF domain and a cyclic nucleotide-binding domain. The gene encoding PDZ-GEF1 maps to human chromosome 4q32.1.

REFERENCES

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2. Liao, Y., et al. 1999. RA-GEF, a novel Rap1A guanine nucleotide exchange factor containing a Ras/Rap1A-associating domain, is conserved between nematode and humans. J. Biol. Chem. 274: 37815-37820.
3. de Rooij, J., et al. 1999. PDZ-GEF1, a guanine nucleotide exchange factor specific for Rap1 and Rap2. J. Biol. Chem. 274: 38125-38130.
4. Kawajiri, A., et al. 2000. Identification of a novel β-catenin-interacting protein. Biochem. Biophys. Res. Commun. 273: 712-717.
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6. Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. Science 316: 1160-1166.
7. Zahedi, R.P., et al. 2008. Phosphoproteome of resting human platelets. J. Proteome Res. 7: 526-534.

CHROMOSOMAL LOCATION

Genetic locus: RAPGEF2 (human) mapping to 4q32.1; Rapgef2 (mouse) mapping to 3 E3.

SOURCE

PDZ-GEF1 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PDZ-GEF1 of human 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-168920 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

PDZ-GEF1 (T-14) is recommended for detection of PDZ-GEF1 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).

PDZ-GEF1 (T-14) is also recommended for detection of PDZ-GEF1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PDZ-GEF1 siRNA (m): sc-152702, PDZ-GEF1 shRNA Plasmid (m): sc-152702-SH and PDZ-GEF1 shRNA (m) Lentiviral Particles: sc-152702-V.

Molecular Weight of PDZ-GEF1: 167 kDa.

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.