SANTA CRUZ BIOTECHNOLOGY, INC.

Trio (C-20): sc-6061

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Protein tyrosine phosphatases, or PTPs, are type I transmembrane proteins, membrane-associated proteins or proteins localized in nuclei. Examples of transmembrane PTPs are LAR, PTPα, PTPβ, PTPγ, PTPδ, PTPε, PTPμ, PTPκ and PTPζ. Transmembrane PTPs play diverse roles during development and in adult tissues. Immunodepletion studies have suggested LAR to be a regulator of Insulin receptor phosphorylation. Trio is a LAR-interacting protein that contains two functional guanine nuclear exchange factor (GEF) domains and a serine/threonine protein kinase (PSK) domain. One of the the Trio-GEF domains exhibits Rac-specific GEF activity while the other exibits Rho-specific GEF activity. The carboxy terminal PSK domain is most similar to the PSK domains of the CaMK family.

REFERENCES

1. den Hertog, J., et al. 1995. Stimulation of receptor protein-tyrosine phosphatase α activity and phosphorylation by phorbol ester. Cell Growth Differ. 6: 303-307.
2. Zondag, G.C., et al. 1995. Homophilic interactions mediated by receptor tyrosine phosphatases μ and κ. A critical role for the novel extracellular MAM domain. J. Biol. Chem. 270: 14247-14250.
3. Milev, P., et al. 1995. Complex-type asparagine-linked oligosaccharides on phosphacan and protein-tyrosine phosphatase-ζ/β mediate their binding to neural cell adhesion molecules and tenascin. J. Biol. Chem. 270: 24650-24653.

CHROMOSOMAL LOCATION

Genetic locus: TRIO (human) mapping to 5p15.2.

SOURCE

Trio (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Trio 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-6061 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Trio (C-20) is recommended for detection of Trio of 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).

Suitable for use as control antibody for Trio siRNA (h): sc-36724, Trio shRNA Plasmid (h): sc-36724-SH and Trio shRNA (h) Lentiviral Particles: sc-36724-V.

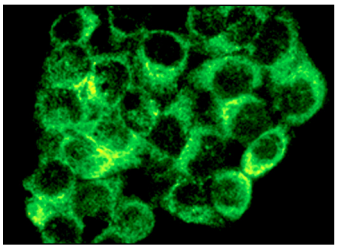
Molecular Weight of Trio: 358 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260 or HeLa whole cell lysate: sc-2200.

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.

DATA



Trio (C-20): sc-6061. Immunofluorescence staining of methanol-fixed HeLa cells showing probably cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Portales-Casamar, E., et al. 2006. Identification of novel neuronal isoforms of the Rho-GEF Trio. Biol. Cell 98: 183-193.
2. Backer, S., et al. 2007. Trio controls the mature organization of neuronal clusters in the hindbrain. J. Neurosci. 27: 10323-10332.
3. Calaf, G.M. and Roy, D. 2007. Gene and protein expressions induced by 17β-estradiol and parathion in cultured breast epithelial cells. Mol. Med. 13: 255-265.
4. Charrasse, S., et al. 2007. M-cadherin activates Rac1 GTPase through the Rho-GEF Trio during myoblast fusion. Mol. Biol. Cell 18: 1734-1743.
5. Bach, A.S., et al. 2010. ADP-ribosylation factor 6 regulates mammalian myoblast fusion through phospholipase D_1 and phosphatidylinositol 4,5-bisphosphate signaling pathways. Mol. Biol. Cell 21: 2412-2424.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.