

# Trio (H-120): sc-28564

## 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, PTP $\alpha$ , PTP $\beta$ , PTP $\gamma$ , PTP $\delta$ , PTP $\epsilon$ , PTP $\zeta$ , PTP $\kappa$  and PTP $\mu$ . 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 exhibits Rho-specific GEF activity. The carboxy-terminal PSK domain is most similar to the PSK domains of the CaMK family.

## REFERENCES

- Ahmad, F., et al. 1995. Increased abundance of the receptor-type protein tyrosine phosphatase LAR accounts for the elevated Insulin receptor dephosphorylating activity in adipose tissue of obese human subjects. *J. Clin. Invest.* 95: 2806-2812.
- den Hertog, J., et al. 1995. Stimulation of receptor protein tyrosine phosphatase  $\alpha$  activity and phosphorylation by phorbol ester. *Cell Growth Differ.* 6: 303-307.
- Brady-Kalnay, S.M., et al. 1995. Receptor protein tyrosine phosphatase PTP $\mu$  associates with cadherins and catenins *in vivo*. *J. Cell Biol.* 130: 977-986.
- Zondag, G.C., et al. 1995. Homophilic interactions mediated by receptor tyrosine phosphatases  $\mu$  and  $\kappa$ . A critical role for the novel extracellular MAM domain. *J. Biol. Chem.* 270: 14247-14250.
- Milev, P., et al. 1995. Complex-type asparagine-linked oligosaccharides on phosphacan and protein tyrosine phosphatase- $\zeta/\beta$  mediate their binding to neural cell adhesion molecules and Tenascin. *J. Biol. Chem.* 270: 24650-24653.
- Elson, A. and Leder, P. 1995. Protein tyrosine phosphatase  $\epsilon$ . An isoform specifically expressed in mouse mammary tumors initiated by v-Ha-Ras or Neu. *J. Biol. Chem.* 270: 26116-26122.

## CHROMOSOMAL LOCATION

Genetic locus: TRIO (human) mapping to 5p15.2; Trio (mouse) mapping to 15 B1.

## SOURCE

Trio (H-120) is a rabbit polyclonal antibody raised against amino acids 1731-1850 mapping within an internal region of Trio of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

Trio (H-120) is recommended for detection of Trio of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Trio (H-120) is also recommended for detection of Trio in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Trio siRNA (h): sc-36724, Trio siRNA (m): sc-36725, Trio shRNA Plasmid (h): sc-36724-SH, Trio shRNA Plasmid (m): sc-36725-SH, Trio shRNA (h) Lentiviral Particles: sc-36724-V and Trio shRNA (m) Lentiviral Particles: sc-36725-V.

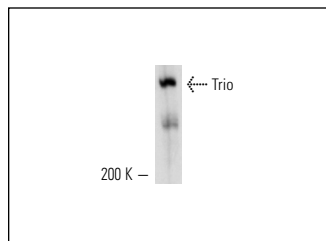
Molecular Weight of Trio: 358 kDa.

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

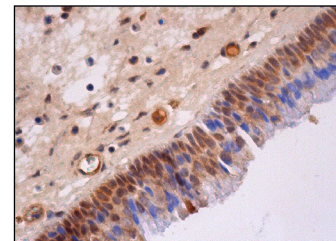
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



Trio (H-120): sc-28564. Western blot analysis of Trio expression in WI-38 whole cell lysate.



Trio (H-120): sc-28564. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing cytoplasmic and nuclear staining of respiratory epithelial cells.

## STORAGE

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