

TRABD2B (N-17): sc-247641

BACKGROUND

TRABD2B (TRAB domain-containing protein 2B), also known as TIKI2 (metalloprotease TIKI2), is a 517 amino acid single-pass type I membrane protein that belongs to the TIKI family. TIKI proteins were named in reference to a mythological large-headed humanoid, as overexpression of TIKI1 (TRABD2A) in *Xenopus* causes head enlargement. TRABD2B and TRABD2A are required for proper head formation by acting as negative regulators of the Wnt signaling pathway. TRABD2B functions as a metalloprotease, which negatively regulates the Wnt signaling pathway by cleaving Wnt-3a and Wnt-5. After cleavage the Wnt proteins become oxidized and form disulfide-bond oligomers, resulting in inactivation. TRABD2B is inhibited by 1,10-phenanthroline, a metalloprotease inhibitor, and EDTA.

REFERENCES

- Zhang, X., et al. 2012. Tiki1 is required for head formation via Wnt cleavage-oxidation and inactivation. *Cell* 149: 1565-1577.
- Cruciat, C.M. and Niehrs, C. 2012. Secreted and transmembrane Wnt inhibitors and activators. *Cold Spring Harb. Perspect. Biol.* 5: a015081.
- Steele, B.M., et al. 2012. WNT-3a modulates platelet function by regulating small GTPase activity. *FEBS Lett.* 586: 2267-2272.
- Lento, W., et al. 2013. Wnt signaling in normal and malignant hematopoiesis. *Cold Spring Harb. Perspect. Biol.* 5: a008011.
- Kiyohashi, K., et al. 2013. Wnt5a signaling mediates biliary differentiation of fetal hepatic stem/progenitor cells. *Hepatology* 57: 2502-2513.
- Maruotti, N., et al. 2013. Systemic effects of Wnt signaling. *J. Cell. Physiol.* 228: 1428-1432.

CHROMOSOMAL LOCATION

Genetic locus: TRABD2B (human) mapping to 1p33.

SOURCE

TRABD2B (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of TRABD2B 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-247641 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

TRABD2B (N-17) is recommended for detection of TRABD2B 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).

TRABD2B (N-17) is also recommended for detection of TRABD2B in additional species, including bovine and porcine.

Suitable for use as control antibody for TRABD2B siRNA (h): sc-88454, TRABD2B shRNA Plasmid (h): sc-88454-SH and TRABD2B shRNA (h) Lentiviral Particles: sc-88454-V.

Molecular Weight of TRABD2B: 57 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.

PROTOCOLS

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