

# TRB-3 (M-165): sc-67122



The Power to Question

## BACKGROUND

TRB-3 (tribbles 3), also called NIPK (neuronal cell death-inducible protein kinase) disrupts Insulin signaling by binding directly to Akt kinases and blocking their activation. TRB-3 binds to ATF4, inhibiting its transcriptional activation activity, and regulates activation of MAP kinases. In the liver, TRB-3 is a target for PPAR- $\alpha$ . Amounts of TRB-3 RNA and protein are higher in livers of diabetic mice compared with those in wildtype mice. TRB-3 contributes to Insulin resistance in individuals with susceptibility to type II diabetes. Highest expression of TRB-3 is in liver, pancreas, peripheral blood leukocytes and bone marrow.

## REFERENCES

- Du, K., et al. 2003. TRB3: a tribbles homolog that inhibits Akt/PKB activation by Insulin in liver. *Science* 300: 1574-1577.
- Kiss-Toth, E., et al. 2004. Human tribbles, a protein family controlling mitogen-activated protein kinase cascades. *J. Biol. Chem.* 279: 42703-42708.
- Koo, S.H., et al. 2004. PGC-1 promotes Insulin resistance in liver through PPAR- $\alpha$ -dependent induction of TRB-3. *Nat. Med.* 10: 530-534.
- Ohoka, N., et al. 2005. TRB3, a novel ER stress-inducible gene, is induced via ATF4-CHOP pathway and is involved in cell death. *EMBO J.* 24: 1243-1255.

## CHROMOSOMAL LOCATION

Genetic locus: Trib3 (mouse) mapping to 2 G3.

## SOURCE

TRB-3 (M-165) is a rabbit polyclonal antibody raised against amino acids 1-165 mapping at the N-terminus of TRB-3 of mouse origin.

## PRODUCT

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

## APPLICATIONS

TRB-3 (M-165) is recommended for detection of TRB-3 of mouse and rat 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).

Suitable for use as control antibody for TRB-3 siRNA (m): sc-44427, TRB-3 shRNA Plasmid (m): sc-44427-SH and TRB-3 shRNA (m) Lentiviral Particles: sc-44427-V.

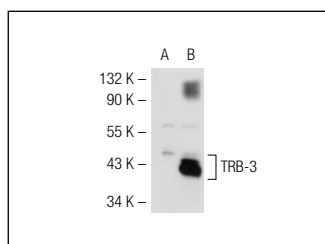
Molecular Weight of TRB-3: 45 kDa.

Positive Controls: TRB-3 (m): 293T Lysate: sc-127703, L8 cell lysate: sc-3807 or rat liver extract: sc-2395.

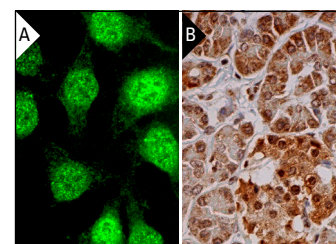
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



TRB-3 (M-165): sc-67122. Western blot analysis of TRB-3 expression in non-transfected: sc-117752 (A) and mouse TRB-3 transfected: sc-127703 (B) 293T whole cell lysates.



TRB-3 (M-165): sc-67122. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear and cytoplasmic staining of exocrine glandular cells and islets of Langerhans (B).

## SELECT PRODUCT CITATIONS

- Attia, R.R., et al. 2010. Regulation of pyruvate dehydrogenase kinase 4 (PDK4) by thyroid hormone: role of the peroxisome proliferator-activated receptor  $\gamma$  coactivator (PGC-1  $\alpha$ ). *J. Biol. Chem.* 285: 2375-2385.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Satisfaction  
Guaranteed

Try **TRB-3 (D-4): sc-365842** or **TRB-3 (B-2): sc-390242**, our highly recommended monoclonal alternatives to TRB-3 (M-165).