

# TRB-3 (H-140): sc-67121

## 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.
- Ord, D., et al. 2005. Characterization of human NIPK (TRB3, SKIP3) gene activation in stressful conditions. *Biochem. Biophys. Res. Commun.* 330: 210-218.
- Prudente, S., et al. 2005. The functional Q84R polymorphism of mammalian tribbles homolog TRB3 is associated with Insulin resistance and related cardiovascular risk in caucasians from Italy. *Diabetes* 54: 2807-2811.
- Wood, J.R., et al. 2005. Valproate-induced alterations in human theca cell gene expression: clues to the association between valproate use and metabolic side effects. *Physiol. Genomics.* 20: 233-243.

## CHROMOSOMAL LOCATION

Genetic locus: TRIB3 (human) mapping to 20p13.

## SOURCE

TRB-3 (H-140) is a rabbit polyclonal antibody raised against amino acids 1-140 mapping at the N-terminus of TRB-3 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.

## 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

TRB-3 (H-140) is recommended for detection of TRB-3 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TRB-3 siRNA (h): sc-44426, TRB-3 shRNA Plasmid (h): sc-44426-SH and TRB-3 shRNA (h) Lentiviral Particles: sc-44426-V.

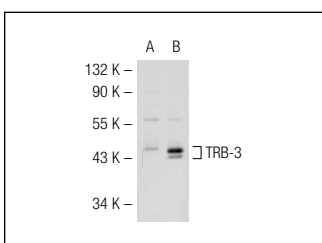
Molecular Weight of TRB-3: 45 kDa.

Positive Controls: TRB-3 (h): 293T Lysate : sc-114588.

## 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.

## DATA



TRB-3 (H-140): sc-67121. Western blot analysis of TRB-3 expression in non-transfected: sc-117752 (A) and human TRB-3 transfected: sc-114588 (B) 293T whole cell lysates.

## PROTOCOLS

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Try **TRB-3 (D-4): sc-365842** or **TRB-3 (G-10): sc-271572**, our highly recommended monoclonal alternatives to TRB-3 (H-140).