

# TRB-1 (E-7): sc-393536

## BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. TRB-1 (tribbles homolog 1), also known as C8FW, GIG2 or TRB1, is a 372 amino acid protein that contains one protein kinase domain and belongs to the Ser/Thr protein kinase superfamily. Expressed ubiquitously with highest expression in bone marrow, thyroid gland, skeletal muscle and pancreas, TRB-1 interacts with MAPK kinases and is thought to regulate the activation of MAP kinases, possibly controlling MAP kinase cascades. The gene encoding TRB-1 maps to human chromosome 8, which consists of nearly 146 million base pairs, houses more than 800 genes and is associated with a variety of diseases and malignancies.

## CHROMOSOMAL LOCATION

Genetic locus: TRB1 (human) mapping to 8q24.13; Trib1 (mouse) mapping to 15 D1.

## SOURCE

TRB-1 (E-7) is a mouse monoclonal antibody raised against amino acids 98-172 mapping within an internal region of TRB-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TRB-1 (E-7) is available conjugated to agarose (sc-393536 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393536 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393536 PE), fluorescein (sc-393536 FITC), Alexa Fluor® 488 (sc-393536 AF488), Alexa Fluor® 546 (sc-393536 AF546), Alexa Fluor® 594 (sc-393536 AF594) or Alexa Fluor® 647 (sc-393536 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393536 AF680) or Alexa Fluor® 790 (sc-393536 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

TRB-1 (E-7) is recommended for detection of TRB-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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-1 siRNA (h): sc-77704, TRB-1 siRNA (m): sc-154620, TRB-1 shRNA Plasmid (h): sc-77704-SH, TRB-1 shRNA Plasmid (m): sc-154620-SH, TRB-1 shRNA (h) Lentiviral Particles: sc-77704-V and TRB-1 shRNA (m) Lentiviral Particles: sc-154620-V.

Molecular Weight of human TRB-1: 41 kDa.

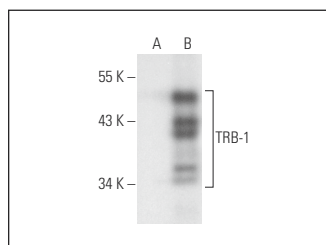
Molecular Weight of mouse TRB-1 isoforms: 41/24 kDa.

Positive Controls: T-47D cell lysate: sc-2293 or TRB-1 (m): 293T Lysate: sc-124268.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



TRB-1 (E-7): sc-393536. Western blot analysis of TRB-1 expression in non-transfected: sc-117752 (A) and mouse TRB-1 transfected: sc-124268 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Qin, S., et al. 2020. SHIP-1 regulates phagocytosis and M2 polarization through the PI3K/Akt-Stat5-Trib1 circuit in *Pseudomonas aeruginosa* infection. *Front. Immunol.* 11: 307.
- Zhang, X., et al. 2021. Trib1 deficiency causes brown adipose respiratory chain depletion and mitochondrial disorder. *Cell Death Dis.* 12: 1098.
- Zhao, D., et al. 2022. Molecular characterization of TRB1 gene and its role in regulation of steroidogenesis in bos grunniens granulosa cells. *Theriogenology* 191: 1-9.

## 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) for detailed protocols and support products.

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