

TBC1D8 (B-5): sc-376637

BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in downregulation of their active form. TBC1D8 (TBC1 domain family member 8), also known as VRP (vascular Rab-GAP/TBC-containing protein), AD3 or HBLP1, is an 897 amino acid protein that is thought to function as a GTPase-activator for Rab proteins. TBC1D8 contains one GRAM domain and one Rab-GAP TBC domain, the latter of which is a highly conserved 200 amino acid motif that conveys the catalytic activity of GTPase-activating proteins. The gene encoding TBC1D8 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome.

REFERENCES

1. Albert, S., et al. 1999. Identification of the catalytic domains and their functionally critical arginine residues of two yeast GTPase-activating proteins specific for Ypt/Rab transport GTPases. *EMBO J.* 18: 5216-5225.
2. Yonekura, H., et al. 1999. Antisense display—a method for functional gene screening: evaluation in a cell-free system and isolation of angiogenesis-related genes. *Nucleic Acids Res.* 27: 2591-2600.
3. Xu, Y.C., et al. 2002. Involvement of TRAF4 in oxidative activation of c-Jun N-terminal kinase. *J. Biol. Chem.* 277: 28051-28057.
4. Itoh, T., et al. 2006. Screening for target Rabs of TBC (Tre-2/Bub2/Cdc16) domain-containing proteins based on their Rab-binding activity. *Genes Cells* 11: 1023-1037.

CHROMOSOMAL LOCATION

Genetic locus: TBC1D8 (human) mapping to 2q11.2; Tbc1d8 (mouse) mapping to 1 B.

SOURCE

TBC1D8 (B-5) is a mouse monoclonal antibody raised against amino acids 701-763 mapping within an internal region of TBC1D8 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TBC1D8 (B-5) is available conjugated to agarose (sc-376637 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376637 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376637 PE), fluorescein (sc-376637 FITC), Alexa Fluor® 488 (sc-376637 AF488), Alexa Fluor® 546 (sc-376637 AF546), Alexa Fluor® 594 (sc-376637 AF594) or Alexa Fluor® 647 (sc-376637 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376637 AF680) or Alexa Fluor® 790 (sc-376637 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

TBC1D8 (B-5) is recommended for detection of TBC1D8 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 TBC1D8 siRNA (h): sc-94469, TBC1D8 siRNA (m): sc-154109, TBC1D8 shRNA Plasmid (h): sc-94469-SH, TBC1D8 shRNA Plasmid (m): sc-154109-SH, TBC1D8 shRNA (h) Lentiviral Particles: sc-94469-V and TBC1D8 shRNA (m) Lentiviral Particles: sc-154109-V.

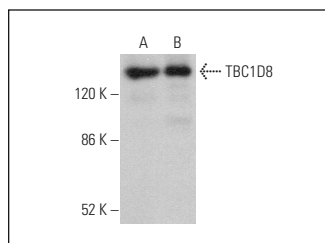
Molecular Weight of TBC1D8: 103 kDa.

Positive Controls: TBC1D8 (m): 293T Lysate: sc-123937, A549 cell lysate: sc-2413 or K-562 whole cell lysate: sc-2203.

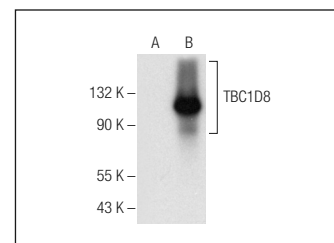
RECOMMENDED SUPPORT REAGENTS

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



TBC1D8 (B-5): sc-376637. Western blot analysis of TBC1D8 expression in K-562 (A) and A549 (B) whole cell lysates.



TBC1D8 (B-5): sc-376637. Western blot analysis of TBC1D8 expression in non-transfected: sc-117752 (A) and mouse TBC1D8 transfected: sc-123937 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chen, M., et al. 2019. TBC1D8 amplification drives tumorigenesis through metabolism reprogramming in ovarian cancer. *Theranostics* 9: 676-690.
2. Kampf, L.L., et al. 2019. TBC1D8B mutations implicate RAB11-dependent vesicular trafficking in the pathogenesis of nephrotic syndrome. *J. Am. Soc. Nephrol.* 30: 2338-2353.

RESEARCH USE

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