

TBC1D2B (E-8): sc-398906

BACKGROUND

GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in downregulation of their active form. TBC1D2B (TBC1 domain family, member 2B) is a 963 amino acid protein that is thought to play a role in GTPase activation. Containing one PH domain and a Rab-GAP TBC domain, TBC1D2B exists as three alternatively spliced isoforms. The gene encoding TBC1D2B maps to human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

REFERENCES

- Hurowitz, G.I., et al. 1993. Neuropsychiatric aspects of adult-onset Tay-Sachs disease: two case reports with several new findings. *J. Neuropsychiatry Clin. Neurosci.* 5: 30-36.
- Girard, A., et al. 2006. A germline-specific class of small RNAs binds mammalian Piwi proteins. *Nature* 442: 199-202.
- Midla, G.S. 2008. Diagnosis and management of patients with Marfan syndrome. *JAAPA* 21: 21-25.
- Dan, B. 2009. Angelman syndrome: current understanding and research prospects. *Epilepsia* 50: 2331-2339.

CHROMOSOMAL LOCATION

Genetic locus: TBC1D2B (human) mapping to 15q24.3; Tbc1d2b (mouse) mapping to 9 E3.1.

SOURCE

TBC1D2B (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 591-610 within an internal region of TBC1D2B of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TBC1D2B (E-8) is available conjugated to agarose (sc-398906 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398906 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398906 PE), fluorescein (sc-398906 FITC), Alexa Fluor[®] 488 (sc-398906 AF488), Alexa Fluor[®] 546 (sc-398906 AF546), Alexa Fluor[®] 594 (sc-398906 AF594) or Alexa Fluor[®] 647 (sc-398906 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398906 AF680) or Alexa Fluor[®] 790 (sc-398906 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398906 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

TBC1D2B (E-8) is recommended for detection of TBC1D2B 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 TBC1D2B siRNA (h): sc-89950, TBC1D2B siRNA (m): sc-154105, TBC1D2B shRNA Plasmid (h): sc-89950-SH, TBC1D2B shRNA Plasmid (m): sc-154105-SH, TBC1D2B shRNA (h) Lentiviral Particles: sc-89950-V and TBC1D2B shRNA (m) Lentiviral Particles: sc-154105-V.

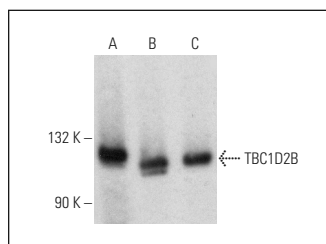
Molecular Weight of TBC1D2B isoforms: 110/104/36 kDa.

Positive Controls: NCI-H460 whole cell lysate: sc-364235, U-251-MG whole cell lysate: sc-364176 or Hep G2 cell lysate: sc-2227.

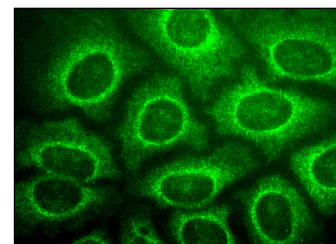
RECOMMENDED SUPPORT REAGENTS

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



TBC1D2B (E-8): sc-398906. Western blot analysis of TBC1D2B expression in NCI-H460 (A), U-251-MG (B) and Hep G2 (C) whole cell lysates.



TBC1D2B (E-8): sc-398906. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Wei, D., et al. 2020. RAB31 marks and controls an ESCRT-independent exosome pathway. *Cell Res.* 31: 157-177.
- Gao, Y., et al. 2022. Intercellular transfer of activated STING triggered by RAB22A-mediated non-canonical autophagy promotes antitumor immunity. *Cell Res.* E-published.

STORAGE

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