SANTA CRUZ BIOTECHNOLOGY, INC.

TBC1D24 (B-4): sc-515806

BACKGROUND

TBC1D24 (TBC1 domain family member 24) is a 559 amino acid cytoplasmic protein that may act as a GTPase-activating protein for Rab family proteins and exists as 2 alternatively spliced isoforms. TBC1D24 contains one Rab-GAP TBC domain, one TLD domain and interacts with ARF6. Involved in neuronal projection development, probably through a negative modulation of ARF6 function, TBC1D24 is highly expressed in brain. TBC1D24 is also expressed in testis, skeletal muscle, heart, kidney, lung and liver. Defects in the TBC1D24 gene are the cause of familial infantile myoclonic epilepsy (FIME), which is characterized as a subtype of idiopathic epilepsy starting in early infancy and manifesting as myoclonic seizures, febrile convulsions and tonic-clonic seizures. The gene that encodes TBC1D24 contains 28,353 bases and maps to human chromosome 16p13.3.

REFERENCES

1. Zara, F., Gennaro, E., Stabile, M., Carbone, I., Malacarne, M., Majello, L., Santangelo, R., de Falco, F.A. and Bricarelli, F.D. 2000. Mapping of a locus for a familial autosomal recessive idiopathic myoclonic epilepsy of infancy to chromosome 16p13. Am. J. Hum. Genet. 66: 1552-1557.
2. de Curtis, I. 2008. Functions of Rac GTPases during neuronal development. Dev. Neurosci. 30: 47-58.
3. Ishibashi, K., Kanno, E., Itoh, T. and Fukuda, M. 2009. Identification and characterization of a novel Tre-2/Bub2/Cdc16 (TBC) protein that possesses Rab3A-GAP activity. Genes Cells 14: 41-52.
4. Falace, A., Filipello, F., La Padula, V., Vanni, N., Madia, F., De Pietri Tonelli, D., de Falco, F.A., Striano, P., Dagna Bricarelli, F., Minetti, C., Benfenati, F., Fassio, A. and Zara, F. 2010. TBC1D24, an ARF6-interacting protein, is mutated in familial infantile myoclonic epilepsy. Am. J. Hum. Genet. 87: 365-370.

CHROMOSOMAL LOCATION

Genetic locus: TBC1D24 (human) mapping to 16p13.3; Tbc1d24 (mouse) mapping to 17 A3.3.

SOURCE

TBC1D24 (B-4) is a mouse monoclonal antibody raised against amino acids 39-85 mapping near the N-terminus of TBC1D24 of human origin.

PRODUCT

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

TBC1D24 (B-4) is available conjugated to agarose (sc-515806 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515806 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515806 PE), fluorescein (sc-515806 FITC), Alexa Fluor® 488 (sc-515806 AF488), Alexa Fluor® 546 (sc-515806 AF546), Alexa Fluor® 594 (sc-515806 AF594) or Alexa Fluor® 647 (sc-515806 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515806 AF680) or Alexa Fluor® 790 (sc-515806 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

TBC1D24 (B-4) is recommended for detection of TBC1D24 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 TBC1D24 siRNA (h): sc-93059, TBC1D24 siRNA (m): sc-154103, TBC1D24 shRNA Plasmid (h): sc-93059-SH, TBC1D24 shRNA Plasmid (m): sc-154103-SH, TBC1D24 shRNA (h) Lentiviral Particles: sc-93059-V and TBC1D24 shRNA (m) Lentiviral Particles: sc-154103-V.

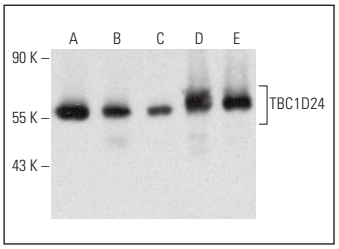
Molecular Weight of TBC1D24: 63 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, mouse brain extract: sc-2253 or IMR-32 cell lysate: sc-2409.

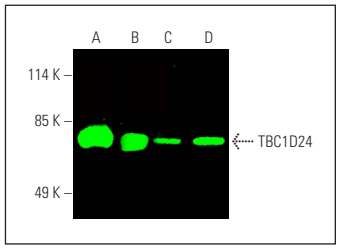
RECOMMENDED SUPPORT REAGENTS

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



TBC1D24 (B-4): sc-515806. Western blot analysis of TBC1D24 expression in C6 (**A**), BC_3H1 (**B**) and Neuro-2A (**C**) whole cell lysates and mouse brain (**D**) and rat brain (**E**) tissue extracts.



TBC1D24 (B-4): sc-515806. Near-infrared western blot analysis of TBC1D24 expression in human brain tissue extract (**A**) and IMR-32 (**B**), U-2 OS (**C**) and T98G (**D**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

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.