

TBCK (WW-8): sc-81865

BACKGROUND

TBCK (TBC domain-containing protein kinase-like protein) also known as TBCKL or MGC16169 in human and A630047E20Rik in mouse, is an 893 amino acid protein belonging to the protein kinase superfamily. TBCK contains one protein kinase domain, a Rab-GAP TBC domain and one rhodanese domain. Four TBCK isoforms are produced by alternative splicing events, and the gene encoding TBCK maps to human chromosome 4q24. Chromosome 4 represents approximately 6% of the human genome and contains nearly 900 genes. Notably, the Huntingtin gene, which is found to encode an expanded glutamine tract in cases of Huntington's disease, is on chromosome 4. FGFR-3 is also encoded on chromosome 4 and has been associated with thanatophoric dwarfism, achondroplasia, Muenke syndrome and bladder cancer. Chromosome 4 is also tied to Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

REFERENCES

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- Cowan, C.M. and Raymond, L.A. 2006. Selective neuronal degeneration in Huntington's disease. *Curr. Top. Dev. Biol.* 75: 25-71.
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- Versteegh, F.G., et al. 2007. EVC working party. Growth hormone analysis and treatment in Ellis-van Creveld syndrome. *Am. J. Med. Genet.* 143: 2113-2121.

CHROMOSOMAL LOCATION

Genetic locus: TBCK (human) mapping to 4q24; TbcK (mouse) mapping to 3 G3.

SOURCE

TBCK (WW-8) is a mouse monoclonal antibody raised against recombinant TBCK of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TBCK (WW-8) is recommended for detection of TBCK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 TBCK siRNA (h): sc-88942, TBCK siRNA (m): sc-140667, TBCK shRNA Plasmid (h): sc-88942-SH, TBCK shRNA Plasmid (m): sc-140667-SH, TBCK shRNA (h) Lentiviral Particles: sc-88942-V and TBCK shRNA (m) Lentiviral Particles: sc-140667-V.

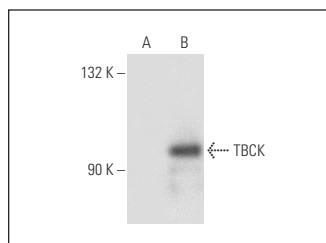
Molecular Weight of TBCK: 101 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or TBCK (h3): 293 Lysate: sc-158727.

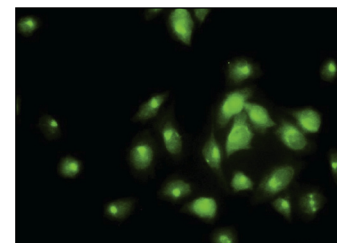
RECOMMENDED SUPPORT REAGENTS

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



TBCK (WW-8): sc-81865. Western blot analysis of TBCK expression in non-transfected: sc-110760 (A) and human TBCK transfected: sc-158727 (B) 293 whole cell lysates.



TBCK (WW-8): sc-81865. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Moreira, D.P., et al. 2022. Neuroprogenitor cells from patients with TBCK encephalopathy suggest deregulation of early secretory vesicle transport. *Front. Cell. Neurosci.* 15: 803302.

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.