

pan-TBC1D3 (T-16): sc-161990

BACKGROUND

The TBC1D3 proteins, some of which include TBC1D3, TBC1D3B, TBC1D3C and TBC1D3G, contain Rab-GAP TBC domains and are thought to function as GTPase activating proteins for Rab 5, thereby mediating Rab 5 function throughout the cell. TBC1D3 family members exhibit different expression patterns and may be involved in the pathogenesis of a variety of carcinomas, including prostate cancer. The genes encoding TBC1D3, TBC1D3B, TBC1D3C and TBC1D3G map to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

1. Onno, M., et al. 1993. Human TRE17 oncogene is generated from a family of homologous polymorphic sequences by single-base changes. *DNA Cell Biol.* 12: 107-118.
2. Onno, M., et al. 1993. Identification of novel sequences in the repertoire of hypervariable TRE17 genes from immortalized nonmalignant and malignant human keratinocytes. *Gene* 131: 209-215.
3. Pei, L., et al. 2002. PRC17, a novel oncogene encoding a Rab GTPase-activating protein, is amplified in prostate cancer. *Cancer Res.* 62: 5420-5424.
4. Masuda-Robens, J.M., et al. 2003. The TRE17 oncogene encodes a component of a novel effector pathway for Rho GTPases Cdc42 and Rac 1 and stimulates actin remodeling. *Mol. Cell. Biol.* 23: 2151-2161.
5. Hodzic, D., et al. 2006. TBC1D3, a hominoid oncoprotein, is encoded by a cluster of paralogues located on chromosome 17q12. *Genomics* 88: 731-736.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 607741. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: TBC1D3F/TBC1D3B/TBC1D3C/TBC1D3H/TBC1D3/TBC1D3G (human) mapping to 17q12.

SOURCE

pan-TBC1D3 (T-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TBC1D3C of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161990 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

pan-TBC1D3 (T-16) is recommended for detection of a broad range of TBC1D3-related proteins of 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 TBC1D3 siRNA (h): sc-93926, TBC1D3 shRNA Plasmid (h): sc-93926-SH and TBC1D3 shRNA (h) Lentiviral Particles: sc-93926-V.

Molecular Weight of TBC1D3: 68 kDa.

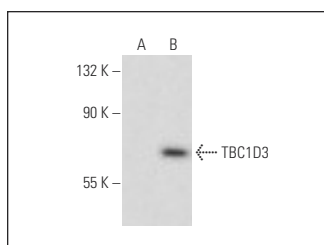
Molecular Weight of TBC1D3B/TBC1D3C/TBC1D3G: 62 kDa.

Positive Controls: TBC1D3C (h): 293T Lysate: sc-117362.

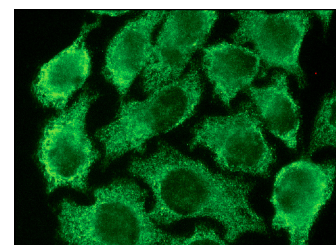
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



pan-TBC1D3 (T-16): sc-161990. Western blot analysis of TBC1D3C expression in non-transfected: sc-117752 (A) and human TBC1D3C transfected: sc-117362 (B) 293T whole cell lysates.



pan-TBC1D3 (T-16): sc-161990. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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