SANTA CRUZ BIOTECHNOLOGY, INC.

pan-TBC1D3 (C-8): sc-514028

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.

SOURCE

pan-TBC1D3 (C-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 502-528 near the C-terminus of TBC1D3C of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

pan-TBC1D3 (C-8) is available conjugated to agarose (sc-514028 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514028 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514028 PE), fluorescein (sc-514028 FITC), Alexa Fluor® 488 (sc-514028 AF488), Alexa Fluor® 546 (sc-514028 AF546), Alexa Fluor® 594 (sc-514028 AF594) or Alexa Fluor® 647 (sc-514028 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514028 AF680) or Alexa Fluor® 790 (sc-514028 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514028 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

pan-TBC1D3 (C-8) is recommended for detection of a broad range of TBC1D3-related proteins 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).

Molecular Weight of TBC1D3: 68/62 kDa.

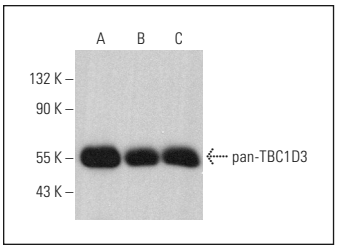
Molecular Weight of TBC1D3B/TBC1D3C/TBC1D3G: 62 kDa.

Positive Controls: TBC1D3C (h): 293T Lysate: sc-117362, F9 cell lysate: sc-2245 or 3T3-L1 cell lysate: sc-2243.

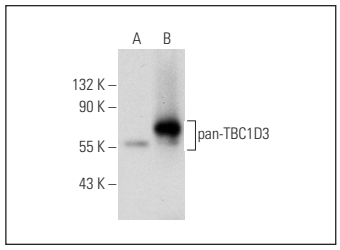
RECOMMENDED SUPPORT REAGENTS

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



pan-TBC1D3 (C-8): sc-514028. Western blot analysis of pan-TBC1D3 expression in F9 (**A**), 3T3-L1 (**B**) and AT3B-1 (**C**) whole cell lysates.



pan-TBC1D3 (C-8): sc-514028. Western blot analysis of pan-TBC1D3 expression in non-transfected: sc-117752 (**A**) and human TBC1D3C transfected: sc-117362 (**B**) 293T whole cell lysates.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.