

TANC2 (D-11): sc-515710



The Power to Question

BACKGROUND

TANC2 (tetratricopeptide repeat, ankyrin repeat and coiled-coil domain-containing protein 2), also known as rolling pebbles homolog B, is a 1,990 amino acid protein that belongs to the TANC family and exists as four alternatively spliced isoforms. TANC2 contains eleven ANK repeats and three TPR repeats. The gene that encodes TANC2 contains 418,170 bases and maps to human chromosome 17q23.3. Encoding over 1,200 genes, chromosome 17 comprises over 2.5% of the human genome. 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. Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. *Am. J. Hum. Genet.* 50: 1235-1242.
2. Evans, S.C. and Lozano, G. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. *Mol. Med. Today* 3: 390-395.
3. Varley, J.M., et al. 1997. A detailed study of loss of heterozygosity on chromosome 17 in tumours from Li-Fraumeni patients carrying a mutation to the TP53 gene. *Oncogene* 14: 865-871.

CHROMOSOMAL LOCATION

Genetic locus: TANC2 (human) mapping to 17q23.2; Tanc2 (mouse) mapping to 11 E1.

SOURCE

TANC2 (D-11) is a mouse monoclonal antibody raised against amino acids 1534-1737 mapping within an internal region of TANC2 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.

TANC2 (D-11) is available conjugated to agarose (sc-515710 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515710 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515710 PE), fluorescein (sc-515710 FITC), Alexa Fluor® 488 (sc-515710 AF488), Alexa Fluor® 546 (sc-515710 AF546), Alexa Fluor® 594 (sc-515710 AF594) or Alexa Fluor® 647 (sc-515710 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515710 AF680) or Alexa Fluor® 790 (sc-515710 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

TANC2 (D-11) is recommended for detection of TANC2 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 TANC2 siRNA (h): sc-156065, TANC2 siRNA (m): sc-154066, TANC2 shRNA Plasmid (h): sc-156065-SH, TANC2 shRNA Plasmid (m): sc-154066-SH, TANC2 shRNA (h) Lentiviral Particles: sc-156065-V and TANC2 shRNA (m) Lentiviral Particles: sc-154066-V.

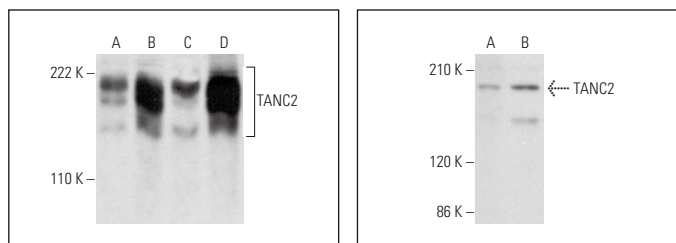
Molecular Weight of TANC2: 220 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or MDA-MB-231 cell lysate: sc-2232.

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



TANC2 (D-11): sc-515710. Western blot analysis of TANC2 expression in MDA-MB-231 (A), MCF7 (B), HeLa (C) and KARPAS-299 (D) whole cell lysates.

TANC2 (D-11): sc-515710. Western blot analysis of TANC2 expression in C2C12 (A) and Neuro-2A (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lu, F., et al. 2018. Hypoxia-ischemia modifies postsynaptic GluN2B-containing NMDA receptor complexes in the neonatal mouse brain. *Exp. Neurol.* 299: 65-74.
2. Van, A.N., et al. 2021. Protein kinase C fusion proteins are paradoxically loss-of-function in cancer. *J. Biol. Chem.* E-published.

RESEARCH USE

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