SANTA CRUZ BIOTECHNOLOGY, INC.

TANK (D-2): sc-166643

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The tumor necrosis factor (TNF) receptor superfamily is composed of several type I integral membrane glycoproteins that exhibit homology in their cystine-rich extracellular domains. Members of this family include TNF-RI and -RII, FAS, OX40, CD27, CD30 and CD40. Ligands for these receptors can be small, secreted proteins such as TNF, or type II integral membrane proteins, such as the CD40 ligand, CD40L. While the signal transduction mechanism of the TNF receptor superfamily is poorly understood, stimulation of cells with either TNF or soluble CD40L has been shown to induce the nuclear translocation of NFκB. Members of the TRAF family associate with activated TNF-R and CD40 and have been implicated in this process. The discovery of a novel protein, designated TANK, has shed light on the means by which TRAF activation of NFκB occurs. TANK is not only capable of binding to all three TRAFs, but also of synergizing with TRAF2 to activate the NFκB signaling cascade. TANK contains a regulatory carboxy terminal domain that maintains its inactivity in unstimulated cells. Upon its association with TRAF2, the inhibitory effect of this domain is overcome.

REFERENCES

1. Smith, C.A., et al. 1994. The TNF receptor superfamily of cellular and viral proteins: activation, costimulation and death. Cell 76: 959-962.
2. Cleveland, J.L., et al. 1995. Contenders in FasL/TNF death signaling. Cell 81: 479-482.
3. Rothe, M., et al. 1995. TRAF2-mediated activation of NFκB by TNF receptor 2 and CD40. Science 269: 1424-1427.

CHROMOSOMAL LOCATION

Genetic locus: TANK (human) mapping to 2q24.2; Tank (mouse) mapping to 2 C1.3.

SOURCE

TANK (D-2) is a mouse monoclonal antibody raised against amino acids 126-425 mapping at the C-terminus of TANK 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.

TANK (D-2) is available conjugated to agarose (sc-166643 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166643 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166643 PE), fluorescein (sc-166643 FITC), Alexa Fluor® 488 (sc-166643 AF488), Alexa Fluor® 546 (sc-166643 AF546), Alexa Fluor® 594 (sc-166643 AF594) or Alexa Fluor® 647 (sc-166643 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166643 AF680) or Alexa Fluor® 790 (sc-166643 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

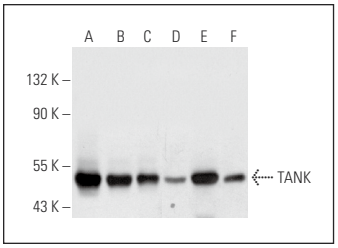
TANK (D-2) is recommended for detection of TANK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TANK siRNA (h): sc-36612, TANK siRNA (m): sc-36613, TANK shRNA Plasmid (h): sc-36612-SH, TANK shRNA Plasmid (m): sc-36613-SH, TANK shRNA (h) Lentiviral Particles: sc-36612-V and TANK shRNA (m) Lentiviral Particles: sc-36613-V.

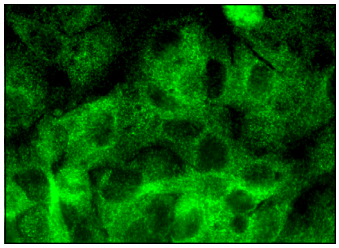
Molecular Weight of TANK: 48 kDa.

Positive Controls: Ramos cell lysate: sc-2216, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

DATA



TANK (D-2): sc-166643. Western blot analysis of TANK expression in Ramos (**A**), Jurkat (**B**), HCT 116 (**C**), HeLa (**D**), HL-60 (**E**) and KNRK (**F**) whole cell lysates.



TANK (D-2): sc-166643. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Yang, S., et al. 2019. Control of antiviral innate immune response by protein geranylgeranylation. Sci. Adv. 5: eaav7999.
2. Saul, V.V., et al. 2019. ULK1/2 restricts the formation of inducible SINT-speckles, membraneless organelles controlling the threshold of TBK1 activation. iScience 19: 527-544.
3. Bell, P.A., et al. 2022. Integrating knowledge of protein sequence with protein function for the prediction and validation of new MALT1 substrates. Comput. Struct. Biotechnol. J. 20: 4717-4732.

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.