SANTA CRUZ BIOTECHNOLOGY, INC.

TANK (A-7): sc-166642

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.
4. Baker, S.J., et al. 1996. Transducers of life and death: TNF receptor superfamily and associated proteins. Oncogene 12: 1-9.
5. McLellan, A.D., et al. 1996. Human dendritic cells activate T lymphocytes via a CD40: CD40 ligand-dependent pathway. Eur. J. Immunol. 26: 1204-1210.
6. Snapper, C.M., et al. 1996. B cells from p50/NFκB knockout mice have selective defects in proliferation, differentiation, germ-line CH transcription, and Ig class switching. J. Immunol. 156: 183-191.

CHROMOSOMAL LOCATION

Genetic locus: TANK (human) mapping to 2q24.2.

SOURCE

TANK (A-7) 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_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

TANK (A-7) is recommended for detection of TANK of 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 shRNA Plasmid (h): sc-36612-SH and TANK shRNA (h) Lentiviral Particles: sc-36612-V.

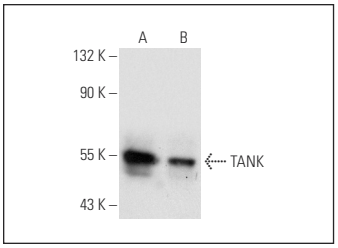
Molecular Weight of TANK: 48 kDa.

Positive Controls: Ramos cell lysate: sc-2216, Jurkat whole cell lysate: sc-2204 or HCT-116 whole cell lysate: sc-364175.

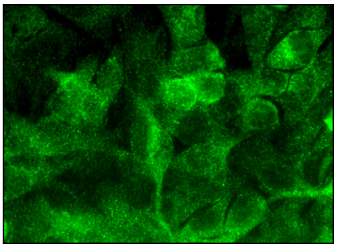
RECOMMENDED SUPPORT REAGENTS

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



TANK (A-7): sc-166642. Western blot analysis of TANK expression in Ramos (**A**) and HCT 116 (**B**) whole cell lysates.



TANK (A-7): sc-166642. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization.

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.