SANTA CRUZ BIOTECHNOLOGY, INC.

TANK (C-20): sc-1997

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.

CHROMOSOMAL LOCATION

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

SOURCE

TANK (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TANK of human origin.

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-1997 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TANK (C-20) is recommended for detection of TANK of mouse, rat and 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).

TANK (C-20) is also recommended for detection of TANK in additional species, including equine, canine, bovine and porcine.

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.

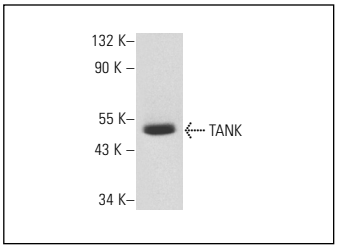
Molecular Weight of TANK: 48 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Ramos cell lysate: sc-2216 or Jurkat whole cell lysate: sc-2204.

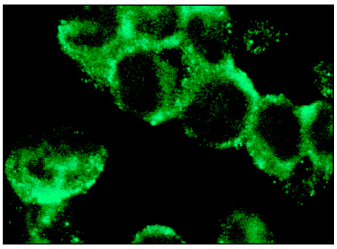
RECOMMENDED SECONDARY REAGENTS

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



TANK (C-20): sc-1997. Western blot analysis of TANK expression in Ramos whole cell lysate



TANK (C-20): sc-1997. Immunofluorescence staining of methanol-fixed Ramos cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Annunziata, C.M., et al. 2000. Hodgkin disease: pharmacologic intervention of the CD40-NFκB pathway by a protease inhibitor. Blood 96: 2841-2848.
2. Zhao, T., et al. 2007. The nemo adaptor bridges the nuclear factor-κB and interferon regulatory factor signaling pathways. Nat. Immunol. 8: 592-600.
3. Zhang, W., et al. 2010. The scaffold protein TANK/I-TRAF inhibits NFκB activation by recruiting polo-like kinase 1. Mol. Biol. Cell 21: 2500-2513.
4. Wu, M., et al. 2012. TRAF family member-associated NF-κB activator (TANK) induced by RANKL negatively regulates osteoclasts survival and function. Int. J. Biol. Sci. 8: 1398-1407.

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.