

TANK (D-2): sc-166643

BACKGROUND

The tumor necrosis factor (TNF) receptor superfamily is composed of several type I integral membrane glycoproteins that exhibit homology in their cysteine-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 NF κ B. 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 NF κ B occurs. TANK is not only capable of binding to all three TRAFs, but also of synergizing with TRAF2 to activate the NF κ B 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 NF κ B 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 C13.

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 μ g IgG₁ 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 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166643 HRP), 200 μ g/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 μ g/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 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

Store at 4 $^{\circ}$ 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 μ g per 100-500 μ g 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.

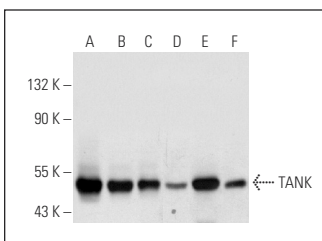
Molecular Weight of TANK: 48 kDa.

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

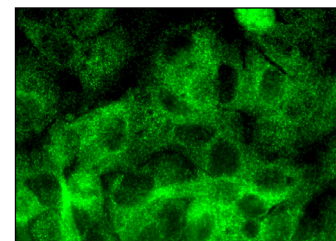
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 (D-2): sc-166643. Western blot analysis of TANK expression in Ramos (A), Jurkat (B), HCT 116 (C), HeLa (D), HL-60 (E) and K562 (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. 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.