SANTA CRUZ BIOTECHNOLOGY, INC.

TNF-R2 (TR75-89): sc-12750

BACKGROUND

Tumor necrosis factor (TNF) is a pleiotropic cytokine whose function is mediated through two distinct cell surface receptors. These receptors, designated TNF-R1 and TNF-R2, are expressed on most cell types. The majority of TNF functions are primarily mediated through TNF-R1, while signaling through TNF-R2 occurs less extensively and is confined to cells of the immune system. Both of these proteins belong to the growing TNF and nerve growth factor (NGF) receptor superfamily, which includes FAS, CD30, CD27 and CD40. The members of this superfamily are type I membrane proteins that share sequence homology confined to the extracellular region. TNF-R1 shares a motif termed the "death domain" with FAS and three structurally unrelated signaling proteins, TRADD, FADD and RIP. This death domain is required for transduction of the apoptotic signal.

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. Hsu, H., et al. 1995. The TNF receptor 1-associated protein TRADD signals cell death and NFκB activation. Cell 81: 495-504.
4. Chinnaiyan, A.M., et al. 1995. FADD, a novel death domain-containing protein, interacts with the death domain of Fas and initiates apoptosis. Cell 81: 505-512.
5. Stanger, B.Z., et al. 1995. RIP: a novel protein containing a death domain that interacts with FAS/Apo-1 (CD95) in yeast and causes cell death. Cell 81: 513-523.
6. Nagata, S., et al. 1995. The Fas death factor. Science 267: 1449-1456.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF1B (human) mapping to 1p36.22; Tnfrsf1b (mouse) mapping to 4 E1.

SOURCE

TNF-R2 (TR75-89) is an Armenian hamster monoclonal antibody raised against purified extracellular domain of type 2 TNF receptor of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TNF-R2 (TR75-89) is available conjugated to agarose (sc-12750 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-12750 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-12750 PE), fluorescein (sc-12750 FITC), Alexa Fluor® 488 (sc-12750 AF488), Alexa Fluor® 546 (sc-12750 AF546), Alexa Fluor® 594 (sc-12750 AF594) or Alexa Fluor® 647 (sc-12750 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-12750 AF680) or Alexa Fluor® 790 (sc-12750 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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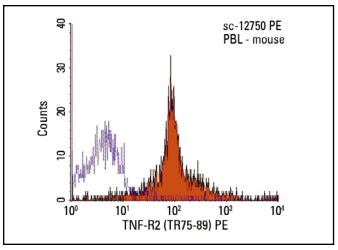
APPLICATIONS

TNF-R2 (TR75-89) is recommended for detection of TNF-R2 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 flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for TNF-R2 siRNA (h): sc-36689, TNF-R2 siRNA (m): sc-36690, TNF-R2 shRNA Plasmid (h): sc-36689-SH, TNF-R2 shRNA Plasmid (m): sc-36690-SH, TNF-R2 shRNA (h) Lentiviral Particles: sc-36689-V and TNF-R2 shRNA (m) Lentiviral Particles: sc-36690-V.

Molecular Weight of TNF-R2: 75 kDa.

DATA



TNF-R2 (TR75-89) PE: sc-12750 PE. FCM analysis of mouse peripheral blood leukocytes. Black line histogram represents the isotype control, normal Armenian hamster IgG-PE: sc-2875.

SELECT PRODUCT CITATIONS

1. Dong, H.P., et al. 2008. Death receptor expression is associated with poor response to chemotherapy and shorter survival in metastatic ovarian carcinoma. Cancer 112: 84-93.
2. Ream, R.M., et al. 2010. Stimulation of naive $CD8^+$ T cells by a variant viral epitope induces activation and enhanced apoptosis. J. Immunol. 184: 2401-2409.
3. Rodrigues, M.F., et al. 2013. Tumour necrosis factor receptors and apoptosis of alveolar macrophages during early infection with attenuated and virulent *Mycobacterium bovis*. Immunology 139: 503-512.
4. Liu, Y., et al. 2017. TWEAK/Fn14 activation participates in Ro52-mediated photosensitization in cutaneous lupus erythematosus. Front. Immunol. 8: 651.
5. Walters, A., et al. 2020. TNFRp75 dependent immune regulation of alveolar macrophages and neutrophils during early *M. tuberculosis* and *M. bovis* BCG infection. Immunology. E-published.

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.