

TNF-R1 (55R-170): sc-12746

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 coined 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

- Derré, J., et al. 1991. The gene for the type 1 tumor necrosis factor receptor (TNF-R1) is localized on band 12p13. *Hum. Genet.* 87: 231-233.
- Milatovich, A., et al. 1991. Tumor necrosis factor receptor genes, TNFR1 and TNFR2, on human chromosomes 12 and 1. *Somat. Cell Mol. Genet.* 17: 519-523.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF1A (human) mapping to 12p13.31; Tnfrsf1a (mouse) mapping to 6 F3.

SOURCE

TNF-R1 (55R-170) is an Armenian hamster monoclonal antibody raised against purified extracellular domain of the type 1 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. Also available azide-free for neutralization, sc-12746 L, 200 µg/0.1 ml.

TNF-R1 (55R-170) is available conjugated to either phycoerythrin (sc-12746 PE) or fluorescein (sc-12746 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

TNF-R1 (55R-170) is recommended for detection of TNF-R1 of mouse, rat and human origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for TNF-R1 siRNA (h): sc-29507, TNF-R1 siRNA (m): sc-36688, TNF-R1 shRNA Plasmid (h): sc-29507-SH, TNF-R1 shRNA Plasmid (m): sc-36688-SH, TNF-R1 shRNA (h) Lentiviral Particles: sc-29507-V and TNF-R1 shRNA (m) Lentiviral Particles: sc-36688-V.

Molecular Weight of TNF-R1: 55 kDa.

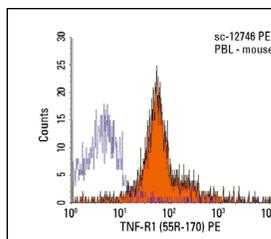
STORAGE

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

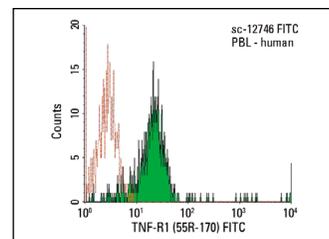
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



TNF-R1 (55R-170) PE: sc-12746 PE. FCM analysis of mouse peripheral blood leukocytes. Black line histogram represents the isotype control, normal Armenian hamster IgG-PE: sc-2875.



TNF-R1 (55R-170) FITC: sc-12746 FITC. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal Armenian hamster IgG-FITC: sc-2864.

SELECT PRODUCT CITATIONS

- Nakae, S., et al. 2006. Mast cells enhance T cell activation: importance of mast cell costimulatory molecules and secreted TNF. *J. Immunol.* 176: 2238-2248.
- 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.
- Eum, D.Y., et al. 2011. Triterpenoid pristimerin synergizes with taxol to induce cervical cancer cell death through reactive oxygen species-mediated mitochondrial dysfunction. *Anticancer Drugs* 22: 763-773.
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- Siegmund, D., et al. 2016. Activation of TNFR2 sensitizes macrophages for TNFR1-mediated necroptosis. *Cell Death Dis.* 7: e2375.
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PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.