

TNF-R1 (C-20): sc-1068

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

1. 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.
2. 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.

SOURCE

TNF-R1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TNF-R1 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-1068 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TNF-R1 (C-20) is recommended for detection of TNF-R1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with TNF-R2.

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

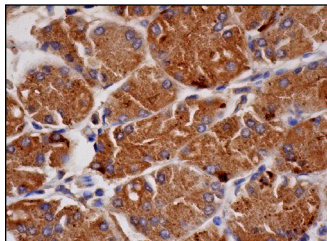
Molecular Weight of TNF-R1: 55 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or U-937 cell lysate: sc-2239.

STORAGE

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

DATA



TNF-R1 (C-20): sc-1068. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. St Louis, D.C., et al. 1999. Evidence for distinct intracellular signaling pathways in CD34⁺ progenitor to dendritic cell differentiation from a human cell line model. *J. Immunol.* 162: 3237-3248.
2. Sol, N., et al. 1999. Possible interactions between the NS-1 protein and tumor necrosis factor α pathways in erythroid cell apoptosis induced by human parvovirus B19. *J. Virol.* 73: 8762-8770.
3. Islam, A. and Adamik, B. 2006. Extracellular TNFR1 release requires the calcium-dependent formation of a nucleobindin 2-ARTS-1 complex. *J. Biol. Chem.* 281: 6860-6873.
4. Ralph, J.A., et al. 2007. A role for type 1 α corticotropin-releasing hormone receptors in mediating local changes in chronically inflamed tissue. *Am. J. Pathol.* 170: 1121-1133.
5. Islam, A. and Shen, X. 2007. The brefeldin A-inhibited guanine nucleotide-exchange protein, BIG2, regulates the constitutive release of TNFR1 exosome-like vesicles. *J. Biol. Chem.* 282: 9591-9599.
6. Slotwinski, R., et al. 2011. Apoptosis in lymphocytes of pancreatic cancer patients: influence of preoperative enteral immunonutrition and extensive surgery. *Arch. Immunol. Ther. Exp.* 59: 385-397.
7. Fritsch, J., et al. 2014. Cell fate decisions regulated by k63 ubiquitination of tumor necrosis factor receptor 1. *Mol. Cell. Biol.* 34: 3214-3228.

RESEARCH USE

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

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