

TNF-R1 (G-2): sc-374185

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.

CHROMOSOMAL LOCATION

Genetic locus: *Tnfrsf1a* (mouse) mapping to 6 F3.

SOURCE

TNF-R1 (G-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 427-454 at the C-terminus of TNF-R1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374185 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

TNF-R1 (G-2) is recommended for detection of TNF-R1 of mouse and rat origin by Western Blotting (starting dilution 1:100, 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), 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).

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

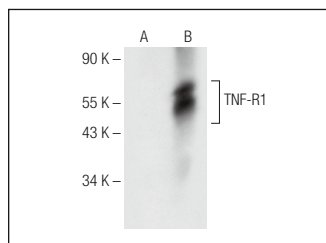
Molecular Weight of TNF-R1: 55 kDa.

Positive Controls: TNF-R1 (m): 293T Lysate: sc-124202.

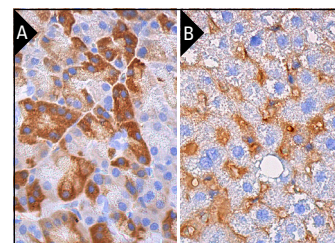
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TNF-R1 (G-2): sc-374185. Western blot analysis of TNF-R1 expression in non-transfected: sc-117752 (A) and mouse TNF-R1 transfected: sc-124202 (B) 293T whole cell lysates.



TNF-R1 (G-2): sc-374185. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat pancreas tissue showing cytoplasmic staining of exocrine glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat liver tissue showing cytoplasmic staining of hepatic sinusoid cells (B).

SELECT PRODUCT CITATIONS

1. Ho, M.Y., et al. 2012. TNF-α induces epithelial-mesenchymal transition of renal cell carcinoma cells via a GSK3β-dependent mechanism. *Mol. Cancer Res.* 10: 1109-1119.
2. Dong, Y., et al. 2016. Receptor-interacting protein kinase 3-mediated programmed cell necrosis in rats subjected to focal cerebral ischemia-reperfusion injury. *Mol. Med. Rep.* 14: 728-736.
3. Meng, X.M., et al. 2018. Wogonin protects against cisplatin-induced acute kidney injury by targeting RIPK1-mediated necroptosis. *Lab. Invest.* 98: 79-94.
4. Cohrs, G., et al. 2019. Expression profiles of pro-inflammatory and pro-apoptotic mediators in secondary tethered cord syndrome after myelomeningocele repair surgery. *Childs Nerv. Syst.* 35: 315-328.

RESEARCH USE

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



See **TNF-R1 (H-5): sc-8436** for TNF-R1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.