

# TNF-R1 (H-5): sc-8436



The Power to Question

## 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 (human) mapping to 12p13.31; Tnfrsf1a (mouse) mapping to 6 F3.

## SOURCE

TNF-R1 (H-5) is a mouse monoclonal antibody raised against amino acids 30-301 mapping within the extracellular domain of TNF-R1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TNF-R1 (H-5) is available conjugated to agarose (sc-8436 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8436 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8436 PE), fluorescein (sc-8436 FITC), Alexa Fluor® 488 (sc-8436 AF488), Alexa Fluor® 546 (sc-8436 AF546), Alexa Fluor® 594 (sc-8436 AF594) or Alexa Fluor® 647 (sc-8436 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8436 AF680) or Alexa Fluor® 790 (sc-8436 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

TNF-R1 (H-5) is recommended for detection of TNF-R1 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), 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 (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.

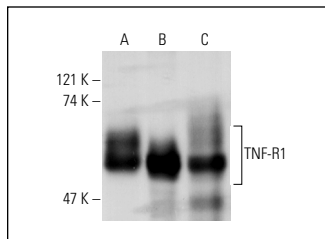
Molecular Weight of TNF-R1: 55 kDa.

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

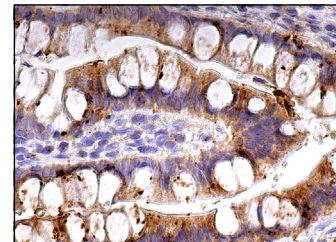
## STORAGE

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

## DATA



TNF-R1 (H-5): sc-8436. Western blot analysis of TNF-R1 expression in MCF7 (A), HeLa (B) and U-937 (C) whole cell lysates.



TNF-R1 (H-5): sc-8436. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

- Guicciardi, M.E., et al. 2001. Cathepsin B knockout mice are resistant to tumor necrosis factor-mediated hepatocyte apoptosis and liver injury: implications for therapeutic applications. *Am. J. Pathol.* 159: 2045-2054.
- Jouan-Lanhuet, S., et al. 2012. TRAIL induces necroptosis involving RIPK1/ RIPK3-dependent PARP-1 activation. *Cell Death Differ.* 19: 2003-2014.
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- Chopra, A., et al. 2014. Novel piperazine-based compounds inhibit microtubule dynamics and sensitize colon cancer cells to tumor necrosis factor-induced apoptosis. *J. Biol. Chem.* 289: 2978-2991.
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- Xu, J., et al. 2018. Berberine alleviates amyloid β25-35-induced inflammatory response in human neuroblastoma cells by inhibiting proinflammatory factors. *Exp. Ther. Med.* 16: 4865-4872.
- Lee, I.Y., et al. 2019. MST1 Negatively regulates TNF-α-Induced NFκB signaling through modulating LUBAC activity. *Mol. Cell* 73: 1138-1149.e6.
- Lo, C.H., et al. 2020. Conformational states of TNF-R1 as a molecular switch for receptor function. *Protein Sci.* 29: 1401-1415.

## RESEARCH USE

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