

TROY (H-230): sc-50320

BACKGROUND

The tumor necrosis factor receptor (TNFR) superfamily represents a growing family of type I transmembrane glycoproteins that are involved in various cellular functions, including proliferation, differentiation and programmed cell death. These proteins share homology for cysteine-rich repeats in the extracellular ligand binding domain and an intracellular death domain. Members of the TNFR superfamily transmit signals through protein-protein interactions, and these signals can lead to the activation of either the caspase and Jun kinase pathways, which promote cell death, or the NF κ B pathway, which results in cell survival. One member of the TNFR superfamily, TROY (also designated TAJ), exists as several isoforms, which vary in function. Full length TROY contains a cytoplasmic tail, which recruits tumor necrosis factor receptor-associated factor 2 (TRAF2). The interaction between TROY and TRAF2 promotes cell survival through the NF κ B signaling pathway. TROY also exhibits significant homology to EDAR, a receptor that determines hair follicle fate, and like EDAR, TROY is expressed in the epithelium. Specifically, full length TROY mRNA is detected in the epithelium of mouse brain, embryo, heart, lung and liver. One truncated version of TROY, designated TNFRSF19, contains a shortened cytoplasmic tail, which prevents TNFRSF19 from activating the NF κ B signal transduction pathway.

REFERENCES

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2. Gruss, H.J., et al. 1996. Structural and biological features of the TNF receptor and TNF ligand superfamilies: interactive signals in the pathobiology of Hodgkin's disease. *Ann. Oncol.* 7: 19-26.
3. Baker, S.J., et al. 1998. Modulation of life and death by the TNF receptor superfamily. *Oncogene* 17: 3261-3270.
4. Gurney, A.L., et al. 1999. Identification of a new member of the tumor necrosis factor family and its receptor, a human ortholog of mouse GITR. *Curr. Biol.* 9: 215-218.
5. Hu, S., et al. 1999. Characterization of TNFRSF19, a novel member of the tumor necrosis factor receptor superfamily. *Genomics* 62: 103-107.
6. Eby, M.T., et al. 2000. TAJ, a novel member of the tumor necrosis factor receptor family, activates the c-Jun N-terminal kinase pathway and mediates caspase-independent cell death. *J. Biol. Chem.* 275: 15336-15342.
7. Kojima, T., et al. 2000. TROY, a newly identified member of the tumor necrosis factor receptor superfamily, exhibits a homology with EDAR and is expressed in embryonic skin and hair follicles. *J. Biol. Chem.* 275: 20742-20747.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF19 (human) mapping to 13q12.11-q12.3; Tnfrsf19 (mouse) mapping to 14 C3.

RESEARCH USE

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

SOURCE

TROY (H-230) is a rabbit polyclonal antibody raised against amino acids 194-423 mapping within a C-terminal cytoplasmic domain of TROY of human origin.

PRODUCT

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

APPLICATIONS

TROY (H-230) is recommended for detection of TROY of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 μ g per 100–500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (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 TROY siRNA (h): sc-40247.

Molecular Weight of TROY: 45 kDa.

Positive Controls: LNCaP cell lysate: sc-2231 or A-431 whole cell lysate: sc-2201.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.