SANTA CRUZ BIOTECHNOLOGY, INC.

TROY (D-4): sc-398526

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 NFκB 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 (TRAF) 2. The interaction between TROY and TRAF2 promotes cell survival through the NFκB 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 NFκB signal transduction pathway.

REFERENCES

1. Gruss, H.J., et al. 1996. Molecular, structural and biological characteristics of the tumor necrosis factor ligand superfamily. Int. J. Clin. Lab. Res. 26: 143-159.
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.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF19 (human) mapping to 13q12.12; Tnfrsf19 (mouse) mapping to 14 D1.

SOURCE

TROY (D-4) is a mouse monoclonal antibody raised against amino acids 197-416 mapping within a C-terminal cytoplasmic domain of TROY of mouse origin.

PRODUCT

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

TROY (D-4) is available conjugated to agarose (sc-398526 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398526 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398526 PE), fluorescein (sc-398526 FITC), Alexa Fluor® 488 (sc-398526 AF488), Alexa Fluor® 546 (sc-398526 AF546), Alexa Fluor® 594 (sc-398526 AF594) or Alexa Fluor® 647 (sc-398526 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398526 AF680) or Alexa Fluor® 790 (sc-398526 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

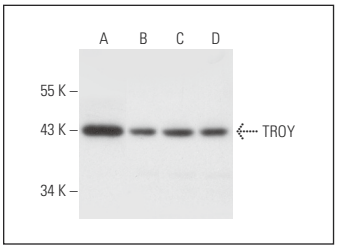
TROY (D-4) is recommended for detection of TROY of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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 TROY siRNA (h): sc-40247, TROY siRNA (m): sc-40248, TROY shRNA Plasmid (h): sc-40247-SH, TROY shRNA Plasmid (m): sc-40248-SH, TROY shRNA (h) Lentiviral Particles: sc-40247-V and TROY shRNA (m) Lentiviral Particles: sc-40248-V.

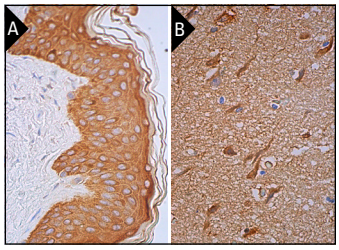
Molecular Weight of TROY: 45 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, A-431 whole cell lysate: sc-2201 or 3T3-L1 cell lysate: sc-2243.

DATA



TROY (D-4): sc-398526. Western blot analysis of TROY expression in human prostate tissue extract (**A**) and A-431 (**B**), Hep G2 (**C**) and 3T3-L1 (**D**) whole cell lysates.



TROY (D-4): sc-398526. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, Langerhans cells and melanocytes (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells, glial cells, endothelial cells and neuropil staining (**B**).

SELECT PRODUCT CITATIONS

1. Wang, H., et al. 2021. Colorectal cancer stem cell states uncovered by simultaneous single-cell analysis of transcriptome and telomeres. Adv. Sci. 8: 2004320.
2. He, J., et al. 2023. Inactivation of the tumor suppressor gene Apc synergizes with H. pylori to induce DNA damage in murine gastric stem and progenitor cells. Sci. Adv. 9: eadh0322.

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.