

TID-1_{L/S} (RS-13): sc-18819

BACKGROUND

TID-1 is the human homologue of the *Drosophila* tumor suppressor protein TID56. Both TID56 and TID-1 belong to the DnaJ family of proteins, which are characterized by a highly conserved J domain that influences apoptotic activity. The human TID-1 gene encodes two splice variants, TID-1_L and TID-1_S. TID-1_L expression increases apoptosis, whereas a mutant J domain suppresses apoptosis. By contrast, TID-1_S expression suppresses apoptosis, whereas a mutant J domain increases apoptosis. TID-1_L and TID-1_S are localized to the mitochondrial matrix, where they regulate apoptotic signal transduction by affecting cytochrome c release and caspase-3 activation. Both TID-1_L and TID-1_S are cleaved at amino acid 66 upon entry into the mitochondria, indicating that mature TID-1_L and TID-1_S represent cleavage products of cytoplasmic pre-proteins.

CHROMOSOMAL LOCATION

Genetic locus: DNAJA3 (human) mapping to 16p13.3; Dnaja3 (mouse) mapping to 16 A1.

SOURCE

TID-1_{L/S} (RS-13) is a mouse monoclonal antibody raised against recombinant TID-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TID-1_{L/S} (RS-13) is available conjugated to agarose (sc-18819 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-18819 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-18819 PE), fluorescein (sc-18819 FITC), Alexa Fluor® 488 (sc-18819 AF488), Alexa Fluor® 546 (sc-18819 AF546), Alexa Fluor® 594 (sc-18819 AF594) or Alexa Fluor® 647 (sc-18819 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-18819 AF680) or Alexa Fluor® 790 (sc-18819 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

TID-1_{L/S} (RS-13) is recommended for detection of TID-1_L and TID-1_S of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TID-1_{L/S} siRNA (h): sc-36673, TID-1_{L/S} siRNA (m): sc-36674, TID-1_{L/S} shRNA Plasmid (h): sc-36673-SH, TID-1_{L/S} shRNA Plasmid (m): sc-36674-SH, TID-1_{L/S} shRNA (h) Lentiviral Particles: sc-36673-V and TID-1_{L/S} shRNA (m) Lentiviral Particles: sc-36674-V.

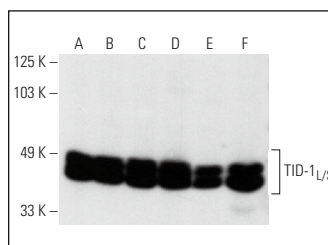
Molecular Weight of TID-1_{L/S}: 40/43 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

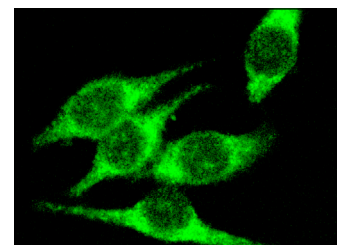
RECOMMENDED SUPPORT REAGENTS

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.

DATA



TID-1_{L/S} (RS-13): sc-18819. Western blot analysis of TID-1_{L/S} expression in HeLa (A), Jurkat (B), K-562 (C), JAR (D), SK-LMS-1 (E) and MES-SA/Dx5 (F) whole cell lysates.



TID-1_{L/S} (RS-13): sc-18819. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Syken, J., et al. 2003. Tid1, a mammalian homologue of the *Drosophila* tumor suppressor lethal(2) tumorous imaginal discs, regulates activation-induced cell death in Th2 cells. *Oncogene* 22: 4636-4641.
2. Liu, H.Y., et al. 2005. Human tumorous imaginal disc 1 (TID1) associates with Trk receptor tyrosine kinases and regulates neurite outgrowth in nnr5-Trk A cells. *J. Biol. Chem.* 280: 19461-19471.
3. Chen, C.Y., et al. 2016. Heterogeneous nuclear ribonucleoproteins A1 and A2 modulate expression of Tid1 isoforms and EGFR signaling in non-small cell lung cancer. *Oncotarget* 7: 16760-16772.
4. Wang, T.H., et al. 2017. Tid1-S regulates the mitochondrial localization of EGFR in non-small cell lung carcinoma. *Oncogenesis* 6: e361.
5. Wang, S.F., et al. 2020. DNAJA3/Tid1 is required for mitochondrial DNA maintenance and regulates migration and invasion of human gastric cancer cells. *Cancers* 12: 3463.
6. Teo, W.H., et al. 2020. *Ganoderma microsporum* immunomodulatory protein, GMI, promotes C2C12 myoblast differentiation *in vitro* via upregulation of Tid1 and STAT3 acetylation. *PLoS ONE* 15: e0244791.
7. Ohno, K., et al. 2024. Imaging phenotype reveals that disulfiram induce protein insolubility in the mitochondrial matrix. *Sci. Rep.* 14: 31401.

STORAGE

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

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