

TID-1_{L/S} (SPM454): sc-56488

BACKGROUND

TID-1 is the human homolog 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.

REFERENCES

1. Kurzik-Dumke, U., Gundacker, D., Renthrop, M. and Gateff, E. 1995. Tumor suppression in *Drosophila* is causally related to the function of the lethal₂ tumorous imaginal discs gene, a DnaJ homolog. *Dev. Genet.* 16; 64-76.
2. Schilling, B., De-Medina, T., Syken, J., Vidal, M. and Munger, K. 1998. A novel human DnaJ protein, hTID-1, a homolog of the *Drosophila* tumor suppressor protein TID56, can interact with the human papillomavirus type 16 E7 oncoprotein. *Virology* 247; 74-85.
3. Bukau, B. and Horwich, A. 1998. The HSP 70 and HSP 60 chaperone machines. *Cell* 92: 351-366.
4. Green, D. and Reed, D. 1998. Mitochondria and apoptosis. *Science* 281: 1309-1312.
5. Syken, J., De-Medina, T. and Munger, K. 1999. TID-1, a human homolog of the *Drosophila* tumor suppressor I₂tid, encodes two mitochondrial modulators of apoptosis with opposing functions. *Proc. Natl. Acad. Sci. USA* 96: 8499-8504.

CHROMOSOMAL LOCATION

Genetic locus: TID1 (human) mapping to 16p13.3; Tid1 (mouse) mapping to 16 A1.

SOURCE

TID-1_{L/S} (SPM454) is a mouse monoclonal antibody raised against recombinant TID-1 protein 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.

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.

APPLICATIONS

TID-1_{L/S} (SPM454) 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 1:100-1:1000), 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: 40 kDa.

Molecular Weight of TID-1_S: 43 kDa.

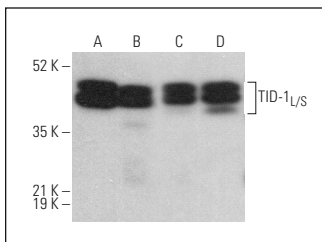
Positive Controls: JAR cell lysate: sc-2276, SW480 cell lysate: sc-2219 or Neuro-2A whole cell lysate: sc-364185.

RECOMMENDED SUPPORT REAGENTS

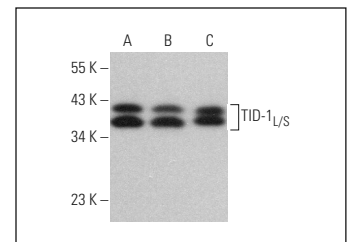
To ensure optimal results, the following support reagents are recommended:

- 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, 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 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} (SPM454): sc-56488. Western blot analysis of TID-1_{L/S} expression in A549 (A), T98G (B), Sol8 (C) and A-10 (D) whole cell lysates.



TID-1_{L/S} (SPM454): sc-56488. Western blot analysis of TID-1_{L/S} expression in JAR (A), SW480 (B) and Neuro-2A (C) whole cell lysates.

PROTOCOLS

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