

# TID-1<sub>L/S</sub> (RS-11): sc-18820

## 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<sub>L</sub> and TID-1<sub>S</sub>. TID-1<sub>L</sub> expression increases apoptosis, whereas a mutant J domain suppresses apoptosis. By contrast, TID-1<sub>S</sub> expression suppresses apoptosis, whereas a mutant J domain increases apoptosis. TID-1<sub>L</sub> and TID-1<sub>S</sub> are localized to the mitochondrial matrix, where they regulate apoptotic signal transduction by affecting cytochrome c release and caspase-3 activation. Both TID-1<sub>L</sub> and TID-1<sub>S</sub> are cleaved at amino acid 66 upon entry into the mitochondria, indicating that mature TID-1<sub>L</sub> and TID-1<sub>S</sub> represent cleavage products of cytoplasmic pre-proteins.

## REFERENCES

1. Kurzik-Dumke, U., et al. 1995. Tumor suppression in *Drosophila* is causally related to the function of the lethal<sub>2</sub> tumorous imaginal discs gene, a DnaJ homolog. *Dev. Genet.* 16: 64-76.
2. Schilling, B., et al. 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

TID-1<sub>L/S</sub> (RS-11) is a mouse monoclonal antibody raised against recombinant human TID1.

## PRODUCT

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

## APPLICATIONS

TID-1<sub>L/S</sub> (RS-11) is recommended for detection of TID-1<sub>L</sub> and TID-1<sub>S</sub> 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<sub>L/S</sub> siRNA (h): sc-36673, TID-1<sub>L/S</sub> siRNA (m): sc-36674, TID-1<sub>L/S</sub> shRNA Plasmid (h): sc-36673-SH, TID-1<sub>L/S</sub> shRNA Plasmid (m): sc-36674-SH, TID-1<sub>L/S</sub> shRNA (h) Lentiviral Particles: sc-36673-V and TID-1<sub>L/S</sub> shRNA (m) Lentiviral Particles: sc-36674-V.

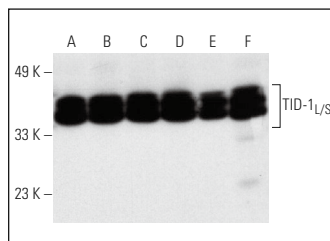
Molecular Weight of TID-1<sub>L/S</sub>: 40/43 kDa.

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

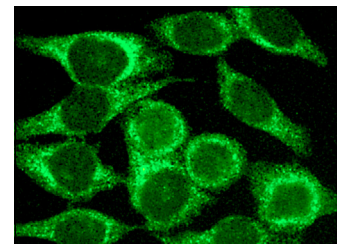
## STORAGE

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

## DATA



TID-1<sub>L/S</sub> (RS-11): sc-18820. Western blot analysis of TID-1<sub>L/S</sub> 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<sub>L/S</sub> (RS11): sc-18820. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

## SELECT PRODUCT CITATIONS

1. Ahn, B.Y., et al. 2010. TID-1 is a new regulator of p53 mitochondrial translocation and apoptosis in cancer. *Oncogene* 29: 1155-1166.
2. Trinh, D.L., et al. 2010. Direct interaction between p53 and TID-1 proteins affects p53 mitochondrial localization and apoptosis. *Oncotarget* 1: 396-404.
3. Choi, J.H., et al. 2012. Absence of a human DnaJ protein hTID-1<sub>S</sub> correlates with aberrant actin cytoskeleton organization in lesional psoriatic skin. *J. Biol. Chem.* 287: 25954-25963.
4. Ng, A.C., et al. 2014. Essential role of TID-1 in maintaining mitochondrial membrane potential homogeneity and mitochondrial DNA integrity. *Mol. Cell. Biol.* 34: 1427-1437.
5. Castrogiovanni, C., et al. 2018. Serine 392 phosphorylation modulates p53 mitochondrial translocation and transcription-independent apoptosis. *Cell Death Differ.* 25: 190-203.
6. Preston, A.J., et al. 2023. Elephant TP53-RETROGENE 9 induces transcription-independent apoptosis at the mitochondria. *Cell Death Discov.* 9: 66.
7. Lee, P.Y., et al. 2023. *Ohwia caudata* aqueous extract attenuates doxorubicin-induced mitochondrial dysfunction in Wharton's jelly-derived mesenchymal stem cells. *Environ. Toxicol.* 38: 2450-2461.
8. Li, Y., et al. 2023. LonP1 links mitochondria-ER interaction to regulate heart function. *Research* 6: 0175.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.