

# Tara (2438C1a): sc-81128

## BACKGROUND

Tara (Trio-associated repeat on Actin), also known as TRIOBP (Trio and F-Actin-binding protein) or DFNB28, is a widely expressed protein with highest levels of expression in heart and placenta. Tara localizes to the nucleus and cytoplasm. It contains a pleckstrin homology domain at the N-terminus and a coiled-coil region at the C-terminus. Tara binds to and interacts with Trio, TRF1 and F-Actin. Via these interactions, Tara plays a role in the development of neural tissue and the organization of the actin cytoskeleton. Tara functions to stabilize F-Actin structures and therefore is also involved in the control of cell growth and motility. Mutations in the gene encoding this protein may result in autosomal recessive nonsyndromic sensorineural deafness type 28 (DFNB28). Five isoforms exist for Tara due to alternative splicing. Isoform 3, also known as the long isoform, is exclusively expressed in fetal retina, cochlea and brain.

## REFERENCES

- Seipel, K., et al. 2001. Tara, a novel F-Actin binding protein, associates with the Trio guanine nucleotide exchange factor and regulates Actin cytoskeletal organization. *J. Cell Sci.* 114: 389-399.
- Hirosawa, M., et al. 2001. Identification of novel transcribed sequences on human chromosome 22 by expressed sequence tag mapping. *DNA Res.* 8: 1-9.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609823. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Lan, J.P., et al. 2004. Isolation of Tara protein and its gene cloning. *Zhejiang Da Xue Xue Bao Yi Xue Ban* 33: 486-490.
- Riazuddin, S., et al. 2005. Mutations in TRIOBP, which encodes a putative cytoskeletal-organizing protein, are associated with nonsyndromic recessive deafness. *Am. J. Hum. Genet.* 78: 137-143.
- Shahin, H., et al. 2005. Mutations in a novel isoform of TRIOBP that encodes a filamentous-Actin binding protein are responsible for DFNB28 recessive nonsyndromic hearing loss. *Am. J. Hum. Genet.* 78: 144-152.
- Li, X., et al. 2007. Expression, purification, and characterization of Tara, a novel telomere repeat-binding factor 1 (TRF1)-binding protein. *Protein Expr. Purif.* 55: 84-92.
- Sugaya, M., et al. 2007. Identification of HLA-A24 restricted shared antigen recognized by autologous cytotoxic T lymphocytes from a patient with large cell carcinoma of the lung. *Int. J. Cancer* 120: 1055-1062.

## CHROMOSOMAL LOCATION

Genetic locus: TRIOBP (human) mapping to 22q13.1.

## SOURCE

Tara (2438C1a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of Tara of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

## APPLICATIONS

Tara (2438C1a) is recommended for detection of Tara of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

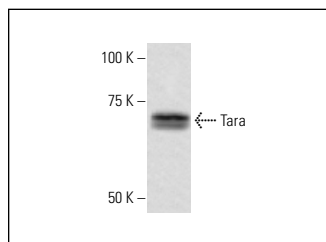
Suitable for use as control antibody for Tara siRNA (h): sc-76630, Tara shRNA Plasmid (h): sc-76630-SH and Tara shRNA (h) Lentiviral Particles: sc-76630-V.

Molecular Weight of Tara isoform 1: 68 kDa.

Molecular Weight of Tara additional isoforms 2-5: 261/250/243/125 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or HEK293 whole cell lysate: sc-45136.

## DATA



Tara (2438C1a): sc-81128. Western blot analysis of Tara expression in HEK293 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Jones, D.K., et al. 2018. Localization and functional consequences of a direct interaction between TRIOBP-1 and HERG proteins in the heart. *J. Cell Sci.* 131 pii: jcs206730.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## PROTOCOLS

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