

## Tara (G-9): sc-377474

### 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., O'Brien, S.P., Iannotti, E., Medley, O.G. and Streuli, M. 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., Nagase, T., Murahashi, Y., Kikuno, R. and Ohara, O. 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<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609823. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Lan, J.P., Luo, Y., Zhu, Y.Y., Sun, J., Lai, X.Y., Li, J.Y., Yu, J., Shi, J.M., Lin, M.F. and Huang, H. 2004. Isolation of Tara protein and its gene cloning. *Zhejiang Da Xue Xue Bao Yi Xue Ban* 33: 486-490.
- Shahin, H., Walsh, T., Sobe, T., Abu Sa'ed, J., Abu Rayan, A., Lynch, E.D., Lee, M.K., Avraham, K.B., King, M.C. and Kanaan, M. 2006. 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.

### CHROMOSOMAL LOCATION

Genetic locus: TRIOBP (human) mapping to 22q13.1; Triobp (mouse) mapping to 15 E1.

### SOURCE

Tara (G-9) is a mouse monoclonal antibody raised against amino acids 2214-2283 mapping near the C-terminus of Tara of human origin.

### PRODUCT

Each vial contains 200 µg IgG<sub>3</sub> 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.

### APPLICATIONS

Tara (G-9) is recommended for detection of Tara 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 Tara siRNA (h): sc-76630, Tara siRNA (m): sc-154071, Tara shRNA Plasmid (h): sc-76630-SH, Tara shRNA Plasmid (m): sc-154071-SH, Tara shRNA (h) Lentiviral Particles: sc-76630-V and Tara shRNA (m) Lentiviral Particles: sc-154071-V.

Molecular Weight of Tara isoform 1: 68 kDa.

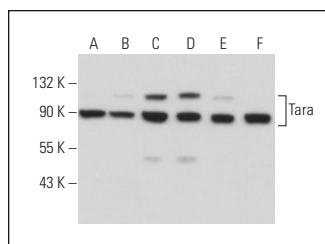
Molecular Weight of Tara additional isoforms 2-5: 261/250/243/125 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or RAW 264.7 whole cell lysate: sc-2211.

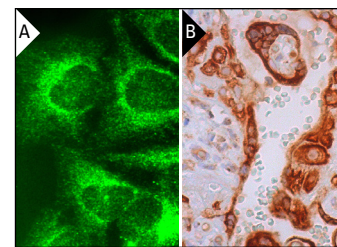
### RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

### DATA



Tara (G-9): sc-377474. Western blot analysis of Tara expression in HeLa (A), Jurkat (B), RAW 264.7 (C), BYDP (D), 3T3-L1 (E) and BJAB (F) whole cell lysates.



Tara (G-9): sc-377474. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of trophoblastic cells and decidual cells (B).

### RESEARCH USE

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