SANTA CRUZ BIOTECHNOLOGY, INC.

Tara (G-9): sc-377474

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. 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.
2. Hirosawa, M., et al. 2001. Identification of novel transcribed sequences on human chromosome 22 by expressed sequence tag mapping. DNA Res. 8: 1-9.
3. 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/
4. 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.
5. Riazuddin, S., et al. 2006. Mutations in TRIOBP, which encodes a putative cytoskeletal-organizing protein, are associated with nonsyndromic recessive deafness. Am. J. Hum. Genet. 78: 137-143.
6. Shahin, H., et al. 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.
7. 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.
8. 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; 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_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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).

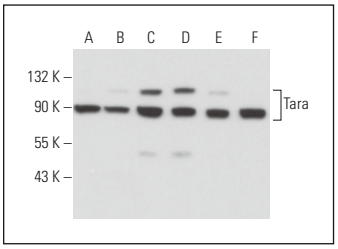
Suitable for use as control antibody for Tara siRNA (h): sc-76630, Tara siRNA (m): sc-154071, Tara shRNA Plasmid (h): sc-76630-SH, Tara shRNA Plasmid (m): sc-154071-SH, Tara shRNA (h) Lentiviral Particles: sc-76630-V and Tara shRNA (m) Lentiviral Particles: sc-154071-V.

Molecular Weight of Tara isoform 1: 68 kDa.

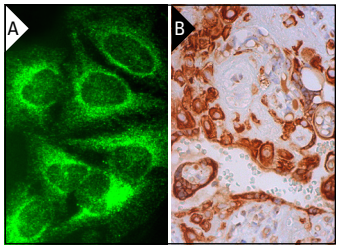
Molecular Weight of Tara additional isoforms 2-5: 261/250/243/125 kDa.

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

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**).

SELECT PRODUCT CITATIONS

1. Yang, H., et al. 2021. CPVL promotes glioma progression via Stat1 pathway inhibition through interactions with the BTK/p300 axis. JCI Insight 6: e146362.

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.