SANTA CRUZ BIOTECHNOLOGY, INC.

Tuba (MH-8): sc-135592

BACKGROUND

Tuba, also known as DNMBP (Dynamin binding protein), is a 1,577 amino acid protein that localizes to a variety of locations within the cell, including the cytoplasm, cytoskeleton, cell junction and Golgi apparatus, and contains one BAR domain, one DH domain and six SH3 domains. Expressed in kidney, heart, lung, liver, brain, pancreas and skeletal muscle, Tuba functions as a scaffold protein that links Dynamin with Actin-regulating proteins and is thought to play a role in protein trafficking between the Golgi and the cell surface. Two isoforms of Tuba exist due to alternative splicing events. The gene encoding Tuba maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromatic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

1. Nagase, T., et al. 1999. Prediction of the coding sequences of unidentified human genes. XIII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 6: 63-70.
2. Salazar, M.A., et al. 2003. Tuba, a novel protein containing BIN/Amphiphysin/Rvs and Dbl homology domains, links Dynamin to regulation of the Actin cytoskeleton. J. Biol. Chem. 278: 49031-49043.
3. Kuwano, R., et al. 2006. Dynamin-binding protein gene on chromosome 10q is associated with late-onset Alzheimer's disease. Hum. Mol. Genet. 15: 2170-2182.
4. Otani, T., et al. 2006. Cdc42 GEF Tuba regulates the junctional configuration of simple epithelial cells. J. Cell Biol. 175: 135-146.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611282. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Minster, R.L., et al. 2008. No association of Dynamin binding protein (DNMBP) gene SNPs and Alzheimer's disease. Neurobiol. Aging 29: 1602-1604.
7. Bettens, K., et al. 2009. DNMBP is genetically associated with Alzheimer dementia in the Belgian population. Neurobiol. Aging 30: 2000-2009.
8. Morgan, A.R., et al. 2009. Association analysis of dynamin-binding protein (DNMBP) on chromosome 10q with late onset Alzheimer's disease in a large caucasian UK sample. Am. J. Med. Genet. B Neuropsychiatr. Genet. 150B: 61-64.

STORAGE

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

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: DNMBP (human) mapping to 10q24.2.

SOURCE

Tuba (MH-8) is a mouse monoclonal antibody raised against recombinant Tuba protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Tuba (MH-8) is recommended for detection of Tuba of 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Tuba siRNA (h): sc-76775, Tuba shRNA Plasmid (h): sc-76775-SH and Tuba shRNA (h) Lentiviral Particles: sc-76775-V.

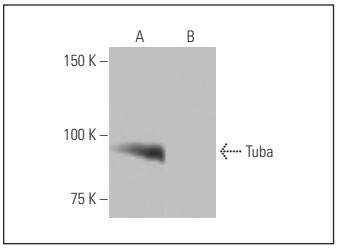
Molecular Weight of Tuba: 180 kDa.

Positive Controls: human Tuba transfected 293T whole cell lysate.

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, UltraCruz® 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).

DATA



Tuba (MH-8): sc-135592. Western blot analysis of Tuba expression in human Tuba transfected (**A**) and non-transfected (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Castaño, J., et al. 2016. SETD7 regulates the differentiation of human embryonic stem cells. PLoS ONE 11: e0149502.

RESEARCH USE

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