SANTA CRUZ BIOTECHNOLOGY, INC.

TAUT (A-11): sc-393036

BACKGROUND

Taurine is an abundant organic osmolyte that possesses antioxidant and immunomodulatory properties and plays a role in cell volume homeostasis. Taurine is taken up into cells via the taurine transporter (TAUT). TAUT, which is sodium- and chloride-dependent, is a multi-pass membrane protein belonging to the sodium neurotransmitter symporter (SNF) family of proteins. TNFα upregulates TAUT expression, while phosphorylation on Serine 322 downregulates it. Overexpression of TAUT protects renal cells from cisplatin-induced nephrotoxicity.

CHROMOSOMAL LOCATION

Genetic locus: SLC6A6 (human) mapping to 3p25.1; Slc6a6 (mouse) mapping to 6 D1.

SOURCE

TAUT (A-11) is a mouse monoclonal antibody raised against amino acids 1-52 mapping at the N-terminus of TAUT of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TAUT (A-11) is available conjugated to agarose (sc-393036 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393036 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393036 PE), fluorescein (sc-393036 FITC), Alexa Fluor® 488 (sc-393036 AF488), Alexa Fluor® 546 (sc-393036 AF546), Alexa Fluor® 594 (sc-393036 AF594) or Alexa Fluor® 647 (sc-393036 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393036 AF680) or Alexa Fluor® 790 (sc-393036 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TAUT (A-11) is recommended for detection of TAUT 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TAUT (A-11) is also recommended for detection of TAUT in additional species, including equine and canine.

Suitable for use as control antibody for TAUT siRNA (h): sc-61648, TAUT siRNA (m): sc-61649, TAUT shRNA Plasmid (h): sc-61648-SH, TAUT shRNA Plasmid (m): sc-61649-SH, TAUT shRNA (h) Lentiviral Particles: sc-61648-V and TAUT shRNA (m) Lentiviral Particles: sc-61649-V.

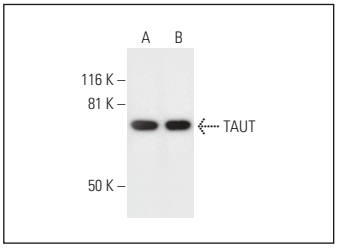
Molecular Weight of TAUT isoforms: 49-132 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, TAUT (m): 293T Lysate: sc-123925 or Y79 cell lysate: sc-2240.

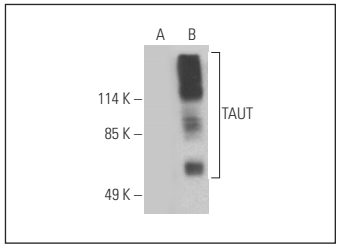
STORAGE

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

DATA



TAUT (A-11): sc-393036. Western blot analysis of TAUT expression in Jurkat (**A**) and Y79 (**B**) whole cell lysates.



TAUT (A-11): sc-393036. Western blot analysis of TAUT expression in non-transfected: sc-117752 (**A**) and mouse TAUT transfected sc-123925 (**B**) 293T whole cell lysates

SELECT PRODUCT CITATIONS

1. Lou, J., et al. 2018. Cytoprotective effect of taurine against hydrogen peroxide-induced oxidative stress in UMR-106 cells through the Wnt/ β-catenin signaling pathway. Biomol. Ther. 26: 584-590.
2. Okano, M., et al. 2022. Taurine induces upregulation of p53 and Beclin1 and has antitumor effect in human nasopharyngeal carcinoma cells *in vitro* and *in vivo*. Acta Histochem. 125: 151978.
3. Twomey, J.D., et al. 2023. Exploring the role of hypoxia-inducible carbonic anhydrase IX (CAIX) in circulating tumor cells (CTCs) of breast cancer. Biomedicines 11: 934.
4. Ahmed, S., et al. 2024. Taurine reduces microglia activation in the brain of aged senescence-accelerated mice by increasing the level of TREM2. Sci. Rep. 14: 7427.
5. Cao, T., et al. 2024. Cancer SLC6A6-mediated taurine uptake transactivates immune checkpoint genes and induces exhaustion in $CD8^+$ T cells. Cell 187: 2288-2304.e27.

RESEARCH USE

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

PROTOCOLS

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