

trichoplein (M-17): sc-139295

BACKGROUND

Trichoplein, also known as THCP (trichoplein keratin filament-binding protein) or mitostatin (mitochondrial protein with oncostatic activity), is a 498 amino acid protein that acts as a tumor suppressor which inhibits cell growth and has pro-apoptotic abilities during cell stress. Localizing to the cytoplasm, mitochondria and cell membrane, trichoplein is expressed at highest levels in breast epithelial cells, normal urothelial cells, skeletal muscle, liver, testis, heart and kidney. Trichoplein is also found in smooth muscle and endothelial cells, with low levels of expression in advanced bladder and breast carcinoma. Trichoplein interacts with Cytokeratin 5, 6, 8, 14, 16 and 18. A member of the THCP family, trichoplein is encoded by a gene that maps to human chromosome 12q24.11.

REFERENCES

- Katanick, S.L. 2005. Fundamentals of ICANL accreditation. *J. Nucl. Med. Technol.* 33: 19-23.
- Panzegrau, B., Gordon, L. and Goudy, G.H. 2005. Outpatient therapeutic 131I for thyroid cancer. *J. Nucl. Med. Technol.* 33: 28-30.
- Yu, J.Q., Zhuang, H., Xiu, Y., El-Haddad, G., Kumar, R. and Alavi, A. 2005. Small urine leak after renal transplantation: detection by delayed 99mTc-DTPA renography—a case report. *J. Nucl. Med. Technol.* 33: 31-33.
- Nishizawa, M., Izawa, I., Inoko, A., Hayashi, Y., Nagata, K., Yokoyama, T., Usukura, J. and Inagaki, M. 2005. Identification of trichoplein, a novel keratin filament-binding protein. *J. Cell Sci.* 118: 1081-1090.
- Vecchione, A., Fassan, M., Anesti, V., Morrione, A., Goldoni, S., Baldassarre, G., Byrne, D., D'Arca, D., Palazzo, J.P., Lloyd, J., Scorrano, L., Gomella, L.G., Iozzo, R.V. and Baffa, R. 2009. MITOSTATIN, a putative tumor suppressor on chromosome 12q24.1, is downregulated in human bladder and breast cancer. *Oncogene* 28: 257-269.
- Cerqua, C., Anesti, V., Pyakurel, A., Liu, D., Naon, D., Wiche, G., Baffa, R., Dimmer, K.S. and Scorrano, L. 2010. Trichoplein/mitostatin regulates endoplasmic reticulum-mitochondria juxtaposition. *EMBO Rep.* 11: 854-860.
- Ibi, M., Zou, P., Inoko, A., Shiromizu, T., Matsuyama, M., Hayashi, Y., Enomoto, M., Mori, D., Hirotsune, S., Kiyono, T., Tsukita, S., Goto, H. and Inagaki, M. 2011. Trichoplein controls microtubule anchoring at the centrosome by binding to Odf2 and ninein. *J. Cell Sci.* 124: 857-864.

CHROMOSOMAL LOCATION

Genetic locus: TCHP (human) mapping to 12q24.11; Tchp (mouse) mapping to 5 F.

SOURCE

trichoplein (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of trichoplein of mouse origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-139295 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

trichoplein (M-17) is recommended for detection of trichoplein of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for trichoplein siRNA (h): sc-95954, trichoplein siRNA (m): sc-154640, trichoplein shRNA Plasmid (h): sc-95954-SH, trichoplein shRNA Plasmid (m): sc-154640-SH, trichoplein shRNA (h) Lentiviral Particles: sc-95954-V and trichoplein shRNA (m) Lentiviral Particles: sc-154640-V.

Molecular Weight of trichoplein: 61 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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