

trichoplein (E-14): sc-139294

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

1. Katanick, S.L. 2005. Fundamentals of ICANL accreditation. *J. Nucl. Med. Technol.* 33: 19-23.
2. Panzgrau, B., et al. 2005. Outpatient therapeutic 131 for thyroid cancer. *J. Nucl. Med. Technol.* 33: 28-30.
3. Yu, J.Q., et al. 2005. Small urine leak after renal transplantation: detection by delayed 99mTc-DTPA renography—a case report. *J. Nucl. Med. Technol.* 33: 31-33.
4. Nishizawa, M., et al. 2005. Identification of trichoplein, a novel keratin filament-binding protein. *J. Cell Sci.* 118: 1081-1090.
5. Vecchione, A., et al. 2009. MITOSTATIN, a putative tumor suppressor on chromosome 12q24.1, is downregulated in human bladder and breast cancer. *Oncogene* 28: 257-269.
6. Cerqua, C., et al. 2010. Trichoplein/mitostatin regulates endoplasmic reticulum-mitochondria juxtaposition. *EMBO Rep.* 11: 854-860.

CHROMOSOMAL LOCATION

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

SOURCE

trichoplein (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of trichoplein of human origin.

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-139294 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

trichoplein (E-14) is recommended for detection of trichoplein of mouse, rat and 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)], 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.

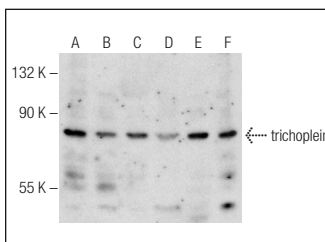
Molecular Weight of trichoplein: 61 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HL-60 whole cell lysate: sc-2209 or Caki-1 cell lysate: sc-2224.

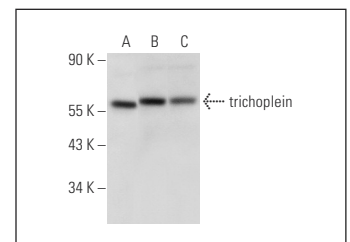
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



trichoplein (E-14): sc-139294. Western blot analysis of trichoplein expression in K-562 (A), HL-60 (B), Caki-1 (C), RT-4 (D), U-251 MG (E) and A-431 (F) whole cell lysates.



trichoplein (E-14): sc-139294. Western blot analysis of trichoplein expression in K-562 (A), CCRF-CEM (B) and MCF7 (C) whole cell lysates.

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.