

TSC-22 (R5-6): sc-101195

BACKGROUND

Transforming growth factor β -stimulated clone-22 (TSC-22) acts as a transcriptional regulator to modulate cell growth and differentiation and cell death. TSC-22 contains a leucine zipper domain as well as a nuclear export signal, resulting in cytoplasmic localization in living cells. However, concomitant with the induction of apoptosis, TSC-22 translocates from the cytoplasm to the nucleus and shows transcriptional regulatory activity. TSC-22 acts as a major downstream component in the TGF β pathway and also the PPAR γ signaling pathway. The association of these two pathways with tumor suppression, and the significant downregulation of TSC-22 mRNA in various cancer types, such as brain and salivary gland tumors, imply an antiproliferative role for TSC-22.

REFERENCES

- Hino, S., et al. 2000. Nuclear translocation of TSC-22 (TGF β -stimulated clone-22) concomitant with apoptosis: TSC-22 as a putative transcriptional regulator. *Biochem. Biophys. Res. Commun.* 278: 659-664.
- Hino, S., et al. 2002. Leucine zipper structure of TSC-22 (TGF β stimulated clone-22) markedly inhibits the anchorage-independent growth of salivary gland cancer cells. *Oncol. Rep.* 9: 371-374.
- Gupta, R.A., et al. 2003. Peroxisome proliferator-activated receptor γ and transforming growth factor β pathways inhibit intestinal epithelial cell growth by regulating levels of TSC-22. *J. Biol. Chem.* 278: 7431-7438.
- Shostak, K.O., et al. 2003. Downregulation of putative tumor suppressor gene TSC-22 in human brain tumors. *J. Surg. Oncol.* 82: 57-64.
- Uchida, D., et al. 2003. Posttranscriptional regulation of TSC-22 (TGF β -stimulated clone-22) gene by TGF β 1. *Biochem. Biophys. Res. Commun.* 305: 846-854.
- Kawamata, H., et al. 2004. TSC-22 (TGF β stimulated clone-22): a novel molecular target for differentiation-inducing therapy in salivary gland cancer. *Curr. Cancer Drug Targets* 4: 521-529.

CHROMOSOMAL LOCATION

Genetic locus: TSC22D1 (human) mapping to 13q14.11; Tsc22d1 (mouse) mapping to 14 D3.

SOURCE

TSC-22 (R5-6) is a mouse monoclonal antibody raised against recombinant TSC-22 of human origin.

PRODUCT

Each vial contains 100 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

TSC-22 (R5-6) is recommended for detection of TSC-22 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 TSC-22 siRNA (h): sc-44174, TSC-22 siRNA (m): sc-154710, TSC-22 shRNA Plasmid (h): sc-44174-SH, TSC-22 shRNA Plasmid (m): sc-154710-SH, TSC-22 shRNA (h) Lentiviral Particles: sc-44174-V and TSC-22 shRNA (m) Lentiviral Particles: sc-154710-V.

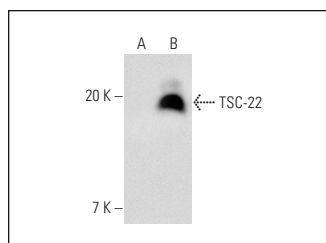
Molecular Weight of TSC-22: 16 kDa.

Positive Controls: TSC-22 (h): 293 Lysate: sc-112912 or MCF7 whole cell lysate: sc-2206.

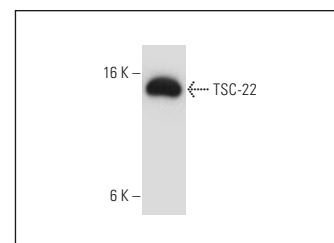
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TSC-22 (R5-6): sc-101195. Western blot analysis of TSC-22 expression in non-transfected: sc-110760 (A) and human TSC-22 transfected: sc-112912 (B) 293 whole cell lysates.



TSC-22 (R5-6): sc-101195. Western blot analysis of TSC-22 expression in MCF7 whole cell lysate.

SELECT PRODUCT CITATIONS

- Cho, M.J., et al. 2017. TSC-22 inhibits CSF-1R function and induces apoptosis in cervical cancer. *Oncotarget* 8: 97990-98003.

PROTOCOLS

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