

TSC-22 D2 (K-21): sc-134131

BACKGROUND

Transforming growth factor β -stimulated clone-22 (TSC-22) acts as a transcriptional regulator to modulate cell growth and differentiation, as well as 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 both the TGF β pathway and 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, implies an antiproliferative role for TSC-22. TSC-22 D2 (TSC22 domain family protein 2), also known as TILZ4, is a 780 amino acid protein that is related to TSC-22 and is involved in adaptation of renal cells to hypertonicity, suggesting a possible role in signal transduction. Three isoforms exist due to alternative splicing events.

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.
- 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.
- Shostak, K.O., et al. 2003. Downregulation of putative tumor suppressor gene TSC-22 in human brain tumors. *J. Surg. Oncol.* 82: 57-64.
- 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.
- Daouti, S., et al. 2005. Development of comprehensive functional genomic screens to identify novel mediators of osteoarthritis. *Osteoarthr. Cartil.* 13: 508-518.
- Shostak, K.O., et al. 2005. Patterns of expression of TSC-22 protein in astrocytic gliomas. *Exp. Oncol.* 27: 314-318.
- Yoon, H.G., et al. 2006. The corepressors silencing mediator of retinoid and thyroid hormone receptor and nuclear receptor corepressor are involved in agonist- and antagonist-regulated transcription by androgen receptor. *Mol. Endocrinol.* 20: 1048-1060.

CHROMOSOMAL LOCATION

Genetic locus: TSC22D2 (human) mapping to 3q25.1; Tsc22d2 (mouse) mapping to 3 D.

SOURCE

TSC-22 D2 (K-21) is an affinity purified rabbit polyclonal antibody raised against synthetic TSC-22 D2 peptide of human origin.

PRODUCT

Each vial contains 50 μ g IgG in 500 μ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

TSC-22 D2 (K-21) is recommended for detection of TSC-22 D2 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TSC-22 D2 siRNA (h): sc-63171, TSC-22 D2 siRNA (m): sc-63172, TSC-22 D2 shRNA Plasmid (h): sc-63171-SH, TSC-22 D2 shRNA Plasmid (m): sc-63172-SH, TSC-22 D2 shRNA (h) Lentiviral Particles: sc-63171-V and TSC-22 D2 shRNA (m) Lentiviral Particles: sc-63172-V.

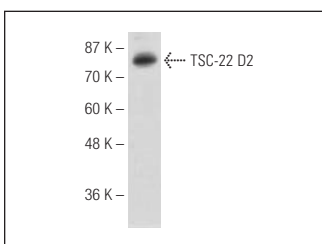
Molecular Weight of TSC-22 D2: 79 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz MarkerTM compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz MarkerTM 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).

DATA



TSC-22 D2 (K-21): sc-134131. Western blot analysis of TSC-22 D2 expression in Hep G2 whole cell lysate.

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.