

# TSC-22 D4 (P-15): sc-55413

## BACKGROUND

Transforming growth factor  $\beta$ -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 $\beta$  pathway and the PPAR $\gamma$  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 D4 (TSC22 domain family protein 4), also known as TILZ2 or THG-1, is a 395 amino acid protein that is related to TSC-22 and functions as a transcriptional repressor.

## REFERENCES

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- Hino, S., et al. 2002. Leucine zipper structure of TSC-22 (TGF $\beta$ -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  $\gamma$  and transforming growth factor  $\beta$  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 $\beta$ -stimulated clone-22) gene by TGF $\beta$  1. *Biochem. Biophys. Res. Commun.* 305: 846-854.
- Kawamata, H., et al. 2004. TSC-22 (TGF $\beta$ -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.
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## CHROMOSOMAL LOCATION

Genetic locus: Tsc22d4 (mouse) mapping to 5 G2.

## SOURCE

TSC-22 D4 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TSC-22 D4 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  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-55413 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TSC-22 D4 (P-15) is recommended for detection of TSC-22 D4 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

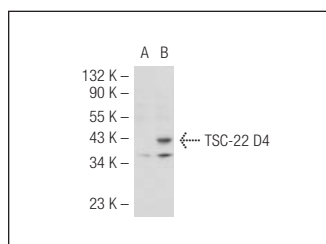
Suitable for use as control antibody for TSC-22 D4 siRNA (m): sc-63174, TSC-22 D4 shRNA Plasmid (m): sc-63174-SH and TSC-22 D4 shRNA (m) Lentiviral Particles: sc-63174-V.

Molecular Weight of TSC-22 D4: 41 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) 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



TSC-22 D4 (P-15): sc-55413. Western blot analysis of TSC-22 D4 expression in non-transfected: sc-117752 (A) and mouse TSC-22 D4 transfected: sc-124325 (B) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.