

# tsg 101 (H-270): sc-22774

## BACKGROUND

The transformation of a normal cell to one that is malignant can result from mutations in genes that encode proteins with key regulatory functions. Examples include the retinoblastoma gene product (Rb p110), p53, VHL and APC. Using a novel cloning strategy that allows the isolation of previously uncharacterized genes encoding selectable recessive phenotypes, an additional tumor suppressor gene has been identified. This gene, termed tsg 101 for tumor susceptibility gene 101, encodes a stathmin binding domain protein. When expression of this growth inhibitory gene is blocked in NIH/3T3 cells using antisense mRNA, the cells exhibit a transformed phenotype and are tumorigenic in SL6 mice.

## REFERENCES

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2. Kern, S.E., et al. 1992. Oncogenic forms of p53 inhibit p53-regulated gene expression. *Science* 256: 827-830.
3. Chop, A.M., et al. 1995. Immunodetection of the presence or absence of full-length APC gene product in human colonic tissues. *Anticancer Res.* 15: 991-997.
4. Waber, P.G., et al. 1996. Frequent allelic loss at chromosome arm 3p is distinct from genetic alterations of the von Hippel-Lindau tumor suppressor gene in head and neck cancer. *Oncogene* 12: 365-369.
5. Gross, D.J., et al. 1996. Familial pheochromocytoma associated with a novel mutation in the von Hippel-Lindau gene. *J. Clin. Endocrinol. Metab.* 81: 147-149.
6. Li, L., et al. 1996. Tsg101: a novel tumor susceptibility gene isolated by controlled homozygous functional knockout of allelic loci in mammalian cells. *Cell* 85: 319-329.
7. Oh, K.B., et al. 2007. Tsg101 is upregulated in a subset of invasive human breast cancers and its targeted overexpression in transgenic mice reveals weak oncogenic properties for mammary cancer initiation. *Oncogene* 26: 5950-5959.
8. Urata, S., et al. 2007. Tsg101 interacts with Marburg VP40 depending on the PPPY motif, but not the PT/SAP motif as for Ebola virus, and plays a critical role in the budding of Marburg virus-like particles induced by VP40, NP, and GP. *J. Virol.* 81: 4895-4899.

## CHROMOSOMAL LOCATION

Genetic locus: TSG101 (human) mapping to 11p15.1; Tsg101 (mouse) mapping to 7 B4.

## SOURCE

tsg 101 (H-270) is a rabbit polyclonal antibody raised against amino acids 121-390 mapping at the C-terminus of tsg 101 of human origin.

## RESEARCH USE

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

## PRODUCT

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

## APPLICATIONS

tsg 101 (H-270) is recommended for detection of tsg 101 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).

tsg 101 (H-270) is also recommended for detection of tsg 101 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for tsg 101 siRNA (h): sc-36752, tsg 101 siRNA (m): sc-36753, tsg 101 shRNA Plasmid (h): sc-36752-SH, tsg 101 shRNA Plasmid (m): sc-36753-SH, tsg 101 shRNA (h) Lentiviral Particles: sc-36752-V and tsg 101 shRNA (m) Lentiviral Particles: sc-36753-V.

Molecular Weight of tsg 101: 45 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, NIH/3T3 whole cell lysate: sc-2210 or 3611-RF whole cell lysate: sc-2215.

## 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 Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## PROTOCOLS

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



Try **tsg 101 (C-2): sc-7964** or **tsg 101 (51): sc-136111**, our highly recommended monoclonal alternatives to tsg 101 (H-270). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **tsg 101 (C-2): sc-7964**.