tsg 101 (C-2): sc-7964

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

tsg 101 (C-2) is a mouse monoclonal antibody raised against amino acids 1-381 representing full length tsg 101 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG$_{2a}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

tsg 101 (C-2) is available conjugated to agarose (sc-7964 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7964 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7964 PE), fluorescein (sc-7964 FITC), Alexa Fluor® 488 (sc-7964 AF488), Alexa Fluor® 546 (sc-7964 AF546), Alexa Fluor® 594 (sc-7964 AF594) or Alexa Fluor® 647 (sc-7964 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7964 AF680) or Alexa Fluor® 790 (sc-7964 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

tsg 101 (C-2) 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), immunohistochemistry (including paraffin-embedded sections) (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 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: Hs68 cell lysate: sc-2230, NIH/3T3 whole cell lysate: sc-2210 or K-562 whole cell lysate: sc-2203.

STORAGE

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

DATA
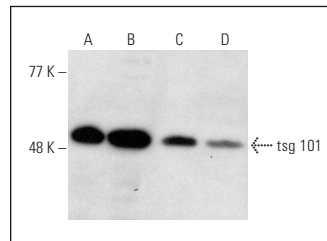
tsg 101 (C-2) HRP: sc-7964 HRP. Direct western blot analysis of tsg 101 expression in NIH/3T3 (**A**), 3611-RF (**B**), Hs68 (**C**) and K-562 (**D**) whole cell lysates.
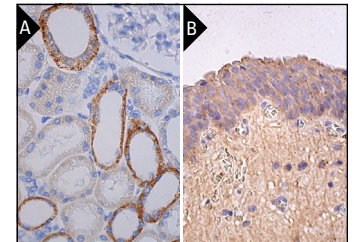
tsg 101 (C-2): sc-7964. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of urothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Wood, L.D., et al. 2001. Characterization of ataxia telangiectasia fibroblasts with extended life-span through telomerase expression. Oncogene 20: 278-288.

2. Mehta, A., et al. 2016. Non-invasive lung cancer diagnosis by detection of GATA6 and NKX2-1 isoforms in exhaled breath condensate. EMBO Mol. Med. 8: 1380-1389.

3. Zhang, Y., et al. 2017. Hypothalamic stem cells control ageing speed partly through exosomal miRNAs. Nature 548: 52-57.

4. Skowyra, M.L., et al. 2018. Triggered recruitment of ESCRT machinery promotes endolysosomal repair. Science 360 pii: eaar5078.

5. Stefanski, A.L., et al. 2019. Murine trophoblast-derived and pregnancy-associated exosome-enriched extracellular vesicle microRNAs: implications for placenta driven effects on maternal physiology. PLoS ONE 14: e0210675.

6. Nkosi, D., et al. 2020. Epstein-Barr virus LMP1 manipulates the content and functions of extracellular vesicles to enhance metastatic potential of recipient cells. PLoS Pathog. 16: e1009023.

7. Shephard, A.P., et al. 2021. Stroma-derived extracellular vesicle mRNA signatures inform histological nature of prostate cancer. J. Extracell. Vesicles 10: e12150.

8. Li, W., et al. 2022. Endothelial cells regulate astrocyte to neural progenitor cell *trans*-differentiation in a mouse model of stroke. Nat. Commun. 13: 7812.

9. Yu, K., et al. 2023. Comparative proteomic analysis of seminal plasma exosomes in buffalo with high and low sperm motility. BMC Genomics 24: 8.

RESEARCH USE

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