SANTA CRUZ BIOTECHNOLOGY, INC.

tsg 101 siRNA (h): sc-36752

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.

PRODUCT

tsg 101 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see tsg 101 shRNA Plasmid (h): sc-36752-SH and tsg 101 shRNA (h) Lentiviral Particles: sc-36752-V as alternate gene silencing products.

For independent verification of tsg 101 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-36752A, sc-36752B and sc-36752C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

tsg 101 siRNA (h) is recommended for the inhibition of tsg 101 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

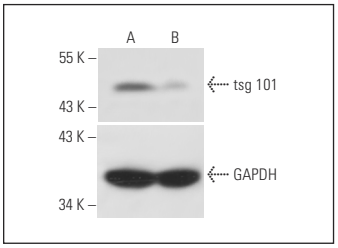
GENE EXPRESSION MONITORING

tsg 101 (C-2): sc-7964 is recommended as a control antibody for monitoring of tsg 101 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor tsg 101 gene expression knockdown using RT-PCR Primer: tsg 101 (h)-PR: sc-36752-PR (20 µl, 428 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

DATA



tsg 101 siRNA (h): sc-36752. Western blot analysis of tsg 101 expression in non-transfected control (**A**) and tsg 101 siRNA transfected (**B**) HeLa cells. Blot probed with tsg 101 (C-2): sc-7964. GAPDH (FL-335): sc-25778 used as specificity and loading control.

SELECT PRODUCT CITATIONS

1. Ceccarelli, S., et al. 2007. Epstein-Barr virus latent membrane protein 1 promotes concentration in multivesicular bodies of fibroblast growth factor 2 and its release through exosomes. Int. J. Cancer 121: 1494-506.
2. Wang, L., et al. 2012. Degradation of internalized αvβ5 integrin is controlled by uPAR bound uPA: effect on β1 integrin activity and α-SMA stress fiber assembly. PLoS ONE 7: e33915.
3. Kulkarni, R. and Prasad, A. 2017. Exosomes derived from HIV-1 infected DCs mediate viral *trans*-infection via fibronectin and galectin-3. Sci. Rep. 7: 14787.
4. Brown, C.W., et al. 2019. Prominin2 drives ferroptosis resistance by stimulating iron export. Dev. Cell 51: 575-586.
5. Bischoff, M.E., et al. 2021. Selective MAP1LC3C (LC3C) autophagy requires noncanonical regulators and the C-terminal peptide. J. Cell Biol. 220: e202004182.
6. Yan, W., et al. 2021. Exosomal miR-130b-3p promotes progression and tubular formation through targeting PTEN in oral squamous cell carcinoma. Front. Cell Dev. Biol. 9: 616306.

RESEARCH USE

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