

GITRL siRNA (h): sc-39827

BACKGROUND

GITRL (glucocorticoid-induced TNF-related ligand), a polypeptide encoded by a human umbilical endothelial cell cDNA, is a member of the TNF (tumor necrosis factor) superfamily. GITRL has a type 2 transmembrane topology that is characteristic of the TNF family. The TNF superfamilies regulate diverse biological functions, including cell proliferation, differentiation and survival. GITRL is found on vascular endothelial cells and in several peripheral tissues (small intestine, ovary, testis and kidney), where it may modulate T lymphocyte survival. The GTR receptor recognizes GITRL and the two interact to regulate NF κ B activation. The ligand-receptor pair of GITRL-GTR protects cells against AICD (activation-induced cell death).

REFERENCES

1. Smith, C.A., et al. 1994. The TNF receptor superfamily of cellular and viral proteins: activation, costimulation and death. *Cell* 76: 959-962.
2. Gruss, H.J. and Dower, S.K. 1995. Tumor necrosis factor ligand superfamily: involvement in the pathology of malignant lymphomas. *Blood* 85: 3378-3404.
3. Nocentini, G., et al. 1997. A new member of the tumor necrosis factor/nerve growth factor receptor family inhibits T cell receptor-induced apoptosis. *Proc. Natl. Acad. Sci. USA* 94: 6216-6221.
4. Ashkenazi, A. and Dixit, V.M. 1998. Death receptors: signaling and modulation. *Science* 281: 1305-1308.
5. Gurney, A.L., et al. 1999. Identification of a new member of the tumor necrosis factor family and its receptor, a human ortholog of mouse GTR. *Curr. Biol.* 9: 215-218.

CHROMOSOMAL LOCATION

Genetic locus: TNFSF18 (human) mapping to 1q25.1.

PRODUCT

GITRL 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GITRL shRNA Plasmid (h): sc-39827-SH and GITRL shRNA (h) Lentiviral Particles: sc-39827-V as alternate gene silencing products.

For independent verification of GITRL (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-39827A, sc-39827B and sc-39827C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

GITRL siRNA (h) is recommended for the inhibition of GITRL 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 μ M in 66 μ l. 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

GITRL (EB11): sc-53973 is recommended as a control antibody for monitoring of GITRL 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor GITRL gene expression knockdown using RT-PCR Primer: GITRL (h)-PR: sc-39827-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.