

TWEAK siRNA (m): sc-37523

BACKGROUND

Proteins belonging to the tumor necrosis factor (TNF) superfamily are potent mediators of inflammation and of the immune system. Members of the TNF superfamily include TNF β , lymphotoxin β (LT β), CD40L, CD30L, CD27L, OX40L, 4-1BBL, FAS-L (APO-1) and TRAIL. Most TNF family members are type II transmembrane proteins that are proteolytically processed at their carboxy-terminal extracellular domain to form a soluble homotrimeric molecule. TWEAK (also designated Apo-3L) has been identified as a secreted ligand belonging to the TNF superfamily. TWEAK seems to induce apoptosis weakly, and it may be involved in cell differentiation *in vivo*.

REFERENCES

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2. Cosman, D. 1994. A family of ligands for the TNF receptor superfamily. *Stem Cells* 12: 440-455.
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5. Baker, S.J., et al. 1996. Transducers of life and death: TNF receptors superfamily and associated proteins. *Oncogene* 12: 1-9.
6. Pitti, R.M., et al. 1996. Induction of apoptosis by Apo-2 ligand, a new member of the tumor necrosis factor cytokine family. *J. Biol. Chem.* 271: 12687-12690.
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8. Kaplan, M.J., et al. 2000. TRAIL (Apo2 ligand) and TWEAK (Apo3 ligand) mediate CD4⁺ T cell killing of antigen-presenting macrophages. *J. Immunol.* 164: 2897-2904.
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CHROMOSOMAL LOCATION

Genetic locus: Tnfsf12 (mouse) mapping to 11 B3.

PRODUCT

TWEAK siRNA (m) 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 TWEAK shRNA Plasmid (m): sc-37523-SH and TWEAK shRNA (m) Lentiviral Particles: sc-37523-V as alternate gene silencing products.

For independent verification of TWEAK (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-37523A, sc-37523B and sc-37523C.

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

TWEAK siRNA (m) is recommended for the inhibition of TWEAK expression in mouse 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

TWEAK (MTW-1): sc-56251 is recommended as a control antibody for monitoring of TWEAK 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 TWEAK gene expression knockdown using RT-PCR Primer: TWEAK (m)-PR: sc-37523-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.