

CD30 siRNA (h): sc-29991

BACKGROUND

The tumor necrosis factor (TNF) receptor family is composed of several type I integral membrane glycoproteins that exhibit homology in their cysteine-rich extracellular domains. Members of this family include FAS, OX40, CD27 and CD30. Ligands for these receptors are often type II transmembrane glycoproteins, as is the case for CD27 and CD30. CD27 is a homodimeric lymphocyte-specific surface antigen present on T and B lymphocytes. Activation of the CD3 complex via the T cell receptor for antigen leads to an increase in CD27 expression. Together, CD27 and its ligand, CD27L, generate co-stimulatory signals required for complete T cell activation. CD30 is a surface marker for neoplastic cells of the Hodgkin's lymphoma and related hematologic malignancies. CD30L has been shown to enhance the proliferation of the Hodgkin's cell line HDLM-2, but exerts antiproliferative effects on large cell anaplastic lymphoma cell lines.

REFERENCES

1. Smith, C.A., et al. 1993. CD30 antigen, a marker for Hodgkin's lymphoma, is a receptor whose ligand defines an emerging family of cytokines with homology to TNF. *Cell* 73: 1349-1360.
2. Armitage, R.J. 1994. Tumor necrosis factor receptor superfamily members and their ligands. *Curr. Opin. Immunol.* 6: 407-413.
3. Hintzen, R.Q., et al. 1994. CD27: marker and mediator of T cell activation. *Immunol. Today* 15: 307-311.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF8 (human) mapping to 1p36.22.

PRODUCT

CD30 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 CD30 shRNA Plasmid (h): sc-29991-SH and CD30 shRNA (h) Lentiviral Particles: sc-29991-V as alternate gene silencing products.

For independent verification of CD30 (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-29991A, sc-29991B and sc-29991C.

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

CD30 siRNA (h) is recommended for the inhibition of CD30 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.

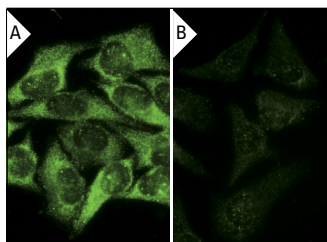
GENE EXPRESSION MONITORING

CD30 (C-3): sc-46683 is recommended as a control antibody for monitoring of CD30 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 CD30 gene expression knockdown using RT-PCR Primer: CD30 (h)-PR: sc-29991-PR (20 μ l, 569 bp). Annealing temperature for the primers should be $55-60^{\circ}$ C and the extension temperature should be $68-72^{\circ}$ C.

DATA



CD30 siRNA (h): sc-29991. Immunofluorescence staining of methanol-fixed, control HeLa (A) and CD30 siRNA silenced HeLa (B) cells showing diminished cytoplasmic staining in the siRNA silenced cells. Cells probed with CD30 (C-20): sc-1737.

SELECT PRODUCT CITATIONS

1. Hasanali, Z.S., et al. 2014. Vorinostat downregulates CD30 and decreases brentuximab vedotin efficacy in human lymphocytes. *Mol. Cancer Ther.* 13: 2784-2792.

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.