

## Produktinformation



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Diagnostik & molekulare Diagnostik



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# Ox40 siRNA (h): sc-42822



The Power to Question

#### **BACKGROUND**

Ox40 (also designated CD134 and Ox40R), is a member of the tumor necrosis factor receptor (TNFR) family. Ox40 is involved in coordinating CD4 T cell selection, migration and cytokine differentiation in T helper (Th)1 and Th2 cells. Ox40 is also involved in the stimulation of T cells, T cell-dependent humoral response and generation of optimal CD4+ T cell responses *in vivo* and *in vitro*. Ox40 is expressed on activated CD4+ T lymphocytes and its ligand, Ox40L, is found preferentially on activated B cells. Engagement of Ox40 with its ligand, Ox40L, delivers a strong costimulatory signal to effector T cells. Members of the TNFR superfamily are critically involved in the regulation of infections, inflammation, autoimmune diseases and tissue homeostasis.

#### **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.
- Chen, A.I., et al. 1999. Ox40-ligand has a critical costimulatory role in dendritic cell: T cell interactions. Immunity 11: 689-698.
- Kopf, M., et al. 1999. 0x40-deficient mice are defective in Th cell proliferation but are competent in generating B cell and CTL responses after virus infection. Immunity 11: 699-708.
- 4. Weinberg, A.D., et al. 2000. Engagement of the 0x40 receptor *in vivo* enhances antitumor immunity. J. Immunol. 164: 2160-2169.
- Murata, K., et al. 2000. Impairment of antigen-presenting cell function in mice lacking expression of 0x40 ligand. J. Exp. Med. 191: 365-374.
- Morimoto, S., et al. 2000. CD134L engagement enhances human B cell Ig production: CD154/CD40, CD70/CD27, and CD134/CD134L interactions coordinately regulate T cell-dependent B cell responses. J. Immunol. 164: 4097-4104.

#### **CHROMOSOMAL LOCATION**

Genetic locus: TNFRSF4 (human) mapping to 1p36.33.

#### **PRODUCT**

0x40 siRNA (h) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see 0x40 shRNA Plasmid (h): sc-42822-SH and 0x40 shRNA (h) Lentiviral Particles: sc-42822-V as alternate gene silencing products.

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

#### **APPLICATIONS**

 $\mbox{Ox40}$  siRNA (h) is recommended for the inhibition of  $\mbox{Ox40}$  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**

0x40 (H-10): sc-376014 is recommended as a control antibody for monitoring of 0x40 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-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-lgG $\kappa$  BP-FITC: sc-516140 or m-lgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

#### **RT-PCR REAGENTS**

Semi-quantitative RT-PCR may be performed to monitor 0x40 gene expression knockdown using RT-PCR Primer: 0x40 (h)-PR: sc-42822-PR (20  $\mu$ 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.

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