SANTA CRUZ BIOTECHNOLOGY, INC.

# CD1E siRNA (h): sc-78837

## BACKGROUND

The human CD1 family consists of five chromosome 1-localized genes which encode proteins that are involved in mediating the presentation of lipid antigens of microbial or self origin on the surface of immune cells. CD1E, also known as R2 or CD1A, is a 322 amino acid single-pass type I membrane protein that localizes to the lumen of the endoplasmic reticulum, as well as to the Golgi apparatus, and contains one Ig-like domain. Expressed in a variety of tissues and on cortical thymocytes, dendritic cells and Langerhans cells, CD1E exists as a heterodimer with β-2-Microglobulin and is necessary for the presentation of glycolipid antigens on the cell surface. CD1E is subject to post-translational mono-ubiquitination and may also be proteolytically cleaved in endosomes to yield a soluble protein. CD1E is present on the surface of some T-cell leukemias, suggesting a possible role in tumorigenesis.

## REFERENCES


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2. Yu, C.Y., et al. 1989. A physical map linking the five CD1 human thymocyte differentiation antigen genes. EMBO J. 8: 3727-3732.
3. Calabi, F., et al. 1989. Two classes of CD1 genes. Eur. J. Immunol. 19: 285-292.
4. Han, M., et al. 1999. Polymorphism of human CD1 genes. Tissue Antigens 54: 122-127.
5. Angénieux, C., et al. 2000. Characterization of CD1E, a third type of CD1 molecule expressed in dendritic cells. J. Biol. Chem. 275: 37757-37764.
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7. Angénieux, C., et al. 2003. Common characteristics of the human and rhesus macaque CD1E molecules: conservation of biochemical and biological properties during primate evolution. Immunogenetics 54: 842-849.
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## CHROMOSOMAL LOCATION

Genetic locus: CD1E (human) mapping to 1q23.1.

## PRODUCT

CD1E 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 CD1E shRNA Plasmid (h): sc-78837-SH and CD1E shRNA (h) Lentiviral Particles: sc-78837-V as alternate gene silencing products.

For independent verification of CD1E (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-78837A, sc-78837B and sc-78837C.

## 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

CD1E siRNA (h) is recommended for the inhibition of CD1E 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CD1E gene expression knockdown using RT-PCR Primer: CD1E (h)-PR: sc-78837-PR (20 µl). 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.