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CD101 siRNA (h): sc-42819

BACKGROUND

CD101 is a disulfide-linked homodimeric polypeptide. The gene encoding the CD101 antigen is identical to the gene encoding for the V7 antigen, which corresponds to a type I transmembrane protein containing seven Ig-like loops in its extracellular domain. CD101 may play an important regulatory role during T cell activation and may also be useful in combination with other markers for the diagnosis of LCH (Langerhans cell histiocytosis). CD101 is expressed on monocytes, granulocytes, dendritic cells and at low levels on a subset of peripheral T-cells comprising both CD4⁺ and CD8⁺, as well as both CD45RA⁺ and CD45RO⁺ cells. Expression of CD101 increases upon T cell activation.

REFERENCES

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2. Bagot, M., et al. 1997. CD101 is expressed by skin dendritic cells. Role in T-lymphocyte activation. *Tissue Antigens* 50: 439-448.
3. Soares, L.R., et al. 1998. V7 (CD101) ligation inhibits TCR/CD3-induced IL-2 production by blocking Ca²⁺ flux and nuclear factor of activated T cell nuclear translocation. *J. Immunol.* 161: 209-217.
4. Bouloc, A., et al. 2000. CD101 expression by Langerhans cell histiocytosis cells. *Histopathology* 36: 229-232.
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6. Penha-Gonçalves, C., et al. 2003. Identification of a structurally distinct CD101 molecule encoded in the 950-kb Idd10 region of NOD mice. *Diabetes* 52: 1551-1556.
7. Maier, L.M., et al. 2005. Construction and analysis of tag single nucleotide polymorphism maps for six human-mouse orthologous candidate genes in type 1 diabetes. *BMC Genet.* 6: 9.

CHROMOSOMAL LOCATION

Genetic locus: CD101 (human) mapping to 1p13.1.

PRODUCT

CD101 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 CD101 shRNA Plasmid (h): sc-42819-SH and CD101 shRNA (h) Lentiviral Particles: sc-42819-V as alternate gene silencing products.

For independent verification of CD101 (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-42819A, sc-42819B and sc-42819C.

PROTOCOLS

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

CD101 siRNA (h) is recommended for the inhibition of CD101 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CD101 gene expression knockdown using RT-PCR Primer: CD101 (h)-PR: sc-42819-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.