

DEC-205 siRNA (h): sc-42860

BACKGROUND

DEC-205 (LY75, lymphocyte antigen 75, GP200-MR6) is a 1,695 residue (mature form) multilectin receptor that belongs to the MMR (macrophage mannose receptor) family of multidomain molecules. MMR family molecules mediate membrane receptor targeting to endosomes or lysosomes rich in major histocompatibility complex class II (MHC II) products. Expressed in mature dendritic cells (DC), DEC-205 contains an extracellular N-terminal cysteine-rich domain, a Fibronectin type II domain, 10 C-type carbohydrate recognition domains, a single transmembrane region and a small cytoplasmic C-terminal domain (31 amino acids) containing a tyrosine at 1679. DEC-205 elicits either an agonistic or antagonistic effect on IL-4 function, which is demonstrated by the ability of DEC-205 to imitate IL-4-induced maturation of epithelium or to inhibit IL-4-induced proliferation of T cells, respectively.

REFERENCES

1. Tungekar, M.F., et al. 1996. Bladder carcinomas and normal urothelium universally express gp200-MR6, a molecule functionally associated with the interleukin 4 receptor (CD 124). *Br. J. Cancer* 73: 429-432.
2. McKay, P.F., et al. 1998. The gp200-MR6 molecule which is functionally associated with the IL-4 receptor modulates B cell phenotype and is a novel member of the human macrophage mannose receptor family. *Eur. J. Immunol.* 28: 4071-4083.
3. Kato, M., et al. 1998. cDNA cloning of human DEC-205, a putative antigen-uptake receptor on dendritic cells. *Immunogenetics* 47: 442-450.
4. Mahnke, K., et al. 2000. The dendritic cell receptor for endocytosis, DEC-205, can recycle and enhance antigen presentation via major histocompatibility complex class II-positive lysosomal compartments. *J. Cell Biol.* 151: 673-684.
5. Kronin, V., et al. 2000. DEC-205 as a marker of dendritic cells with regulatory effects on CD8 T cell responses. *Int. Immunol.* 12: 731-735.

CHROMOSOMAL LOCATION

Genetic locus: LY75 (human) mapping to 2q24.2.

PRODUCT

DEC-205 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 DEC-205 shRNA Plasmid (h): sc-42860-SH and DEC-205 shRNA (h) Lentiviral Particles: sc-42860-V as alternate gene silencing products.

For independent verification of DEC-205 (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-42860A, sc-42860B and sc-42860C.

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

DEC-205 siRNA (h) is recommended for the inhibition of DEC-205 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

DEC-205 (F-4): sc-515016 is recommended as a control antibody for monitoring of DEC-205 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-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor DEC-205 gene expression knockdown using RT-PCR Primer: DEC-205 (h)-PR: sc-42860-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.