

8D6 siRNA (h): sc-106884

BACKGROUND

The 8D6 protein, also known as 8D6A, CD320 or FDC-SM-8D6, is a single pass, type I membrane protein with two low-density lipoprotein receptor ligand binding repeats (LDL-A modules). It is expressed by follicular dendritic cells in the germinal center and acts as a stimulatory signaling molecule. Follicular dendritic cells and T cells interact with germinal center B cells, providing signals for survival, proliferation and differentiation into memory B cells and plasma cells. A disruption of this interaction results in apoptosis of B cells. 8D6 is a growth factor required for plasma cell generation from germinal center B cells. Protein 8D6, together with HCAM (or CD44), plays a significant role in the proliferation of lymphoma cells of germinal center origin. 8D6 is responsible for enhancing proliferation while HCAM inhibits apoptosis.

REFERENCES

1. Shaw, M.A. 1987. Monoclonal anti-LWab and anti-D reagents recognize a number of different epitopes. Use of red cells of non-human primates. *J. Immunogenet.* 13: 377-386.
2. Itohara, S., et al. 1989. Monoclonal antibodies specific to native murine T-cell receptor $\gamma\delta$: analysis of $\gamma\delta$ T cells during thymic ontogeny and in peripheral lymphoid organs. *Proc. Natl. Acad. Sci. USA* 86: 5094-5098.
3. Kirsch, A.H., et al. 1997. The pattern of expression of CD147/neurothelin during human T cell ontogeny as defined by the monoclonal antibody 8D6. *Tissue Antigens* 50: 147-152.
4. Li, L., et al. 2000. Identification of a human follicular dendritic cell molecule that stimulates germinal center B cell growth. *J. Exp. Med.* 191: 1077-1084.
5. Zhang, X., et al. 2001. The distinct roles of T cell-derived cytokines and a novel follicular dendritic cell-signaling molecule 8D6 in germinal center-B cell differentiation. *J. Immunol.* 167: 49-56.
6. Choi, Y.S., et al. 2003. A workshop on the marrow microenvironment and hematological malignancy. *Cancer Res.* 63: 7539-7541.
7. Park, C.S., et al. 2004. Follicular dendritic cells produce IL-15 that enhances germinal center B cell proliferation in membrane-bound form. *J. Immunol.* 173: 6676-6683.

CHROMOSOMAL LOCATION

Genetic locus: CD320 (human) mapping to 19p13.2.

PRODUCT

8D6 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 8D6 shRNA Plasmid (h): sc-106884-SH and 8D6 shRNA (h) Lentiviral Particles: sc-106884-V as alternate gene silencing products.

For independent verification of 8D6 (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-106884A, sc-106884B and sc-106884C.

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

8D6 siRNA (h) is recommended for the inhibition of 8D6 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

8D6 (F-12): sc-393892 is recommended as a control antibody for monitoring of 8D6 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 8D6 gene expression knockdown using RT-PCR Primer: 8D6 (h)-PR: sc-106884-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.

PROTOCOLS

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