SANTA CRUZ BIOTECHNOLOGY, INC.

IGSF6 siRNA (h): sc-93333

BACKGROUND

Ig (immunoglobulin) superfamily members exhibit functional characteristics including immune responses, growth factor signaling and cell adhesion. IGSF6 (immunoglobulin superfamily, member 6), also known as DORA, is a novel 241 amino acid single-pass type I membrane protein that contains one Ig-like C2-type (immunoglobulin-like) domain. Expressed in spleen, dendritic cells, peripheral blood lymphocytes and lymph node, IGSF6 is induced by TNFα and GM-CSF in dendritic cells and downregulated by ionomycin and PMA in monocytes. IGSF6 may function as a co-receptor in the antigen uptake complex or dendritic cell recirculation and is encoded by a gene located on human chromosome 16p12.2, a locus associated with inflammatory bowel disease.

REFERENCES

1. Bates, E.E., et al. 1998. CD40L activation of dendritic cells down-regulates DORA, a novel member of the immunoglobulin superfamily. Mol. Immunol. 35: 513-524.
2. Lai, C.H., et al. 2000. Identification of novel human genes evolutionarily conserved in *Caenorhabditis elegans* by comparative proteomics. Genome Res. 10: 703-713.
3. Bates, E.E., et al. 2000. The mouse and human IGSF6 (DORA) genes map to the inflammatory bowel disease 1 locus and are embedded in an intron of a gene of unknown function. Immunogenetics 52: 112-120.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606222. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. King, K., et al. 2003. Genetic variation in the IGSF6 gene and lack of association with inflammatory bowel disease. Eur. J. Immunogenet. 30: 187-190.
6. Shu, K.X., et al. 2006. Characterization of the human PAP1 gene and its homologue possible involvement in mouse embryonic development. Colloids Surf. B, Biointerfaces 52: 22-30.

CHROMOSOMAL LOCATION

Genetic locus: IGSF6 (human) mapping to 16p12.2.

PRODUCT

IGSF6 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 IGSF6 shRNA Plasmid (h): sc-93333-SH and IGSF6 shRNA (h) Lentiviral Particles: sc-93333-V as alternate gene silencing products.

For independent verification of IGSF6 (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-93333A, sc-93333B and sc-93333C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

IGSF6 siRNA (h) is recommended for the inhibition of IGSF6 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

IGSF6 (H-5): sc-377053 is recommended as a control antibody for monitoring of IGSF6 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 IGSF6 gene expression knockdown using RT-PCR Primer: IGSF6 (h)-PR: sc-93333-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

ROTOCOLS

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