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HLA-DQA2 siRNA (h): sc-42917

BACKGROUND

Major histocompatibility complex (MHC) molecules, which include human leukocyte antigens (HLAs), form an integral part of the immune response system. They are cell-surface receptors that bind foreign peptides and present them to cytotoxic T lymphocytes (CTLs). There are two classes of HLA antigens, class I (HLA-A, HLA-B and HLA-C) and class II (HLA-D). HLA-DQ and HLA-DR are MHC class II molecules which regulate immune response and suppression. HLA-DQA2 (HLA class II histocompatibility antigen, DQ α 2 chain), also known as DX alpha chain, HLA-DXA or HLA-DQA1, is a 255 amino acid single-pass type I membrane protein that belongs to the MHC class II family. HLA-DQA2 is expressed at low levels on the surface of B-lymphoblastoid cells and is encoded by a gene that maps to human chromosome 6p21.32.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: HLA-DQA2 (human) mapping to 6p21.32.

PRODUCT

HLA-DQA2 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 HLA-DQA2 shRNA Plasmid (h): sc-42917-SH and HLA-DQA2 shRNA (h) Lentiviral Particles: sc-42917-V as alternate gene silencing products.

For independent verification of HLA-DQA2 (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-42917A, sc-42917B and sc-42917C.

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

HLA-DQA2 siRNA (h) is recommended for the inhibition of HLA-DQA2 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 HLA-DQA2 gene expression knockdown using RT-PCR Primer: HLA-DQA2 (h)-PR: sc-42917-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.