SANTA CRUZ BIOTECHNOLOGY, INC.

HCP5 siRNA (h): sc-95129

BACKGROUND

The major histocompatibility complex (MHC) is a region present on chromosome 6p21.3 that is characterized by multiple duplicated gene families. HCP5 (HLA class I histocompatibility antigen protein P5), also known as P5-1, is a 132 amino acid protein that is encoded by a gene mapping to human chromosome 6p21.33. Localizing within the MHC class I region, HCP5 is not structurally related to other MHC class I genes, but does have high sequence similarity with HERV-L and HERV-16. HCP5 also has high sequence homology to retroviral Pol genes, making it a possible candidate for interaction with HIV-1 through an antisense mechanism that prevents retrovirus transcription. Single-nucleotide polymorphisms (SNPs) to the region of the HCP5 gene that corresponds with HLA-B has been linked to a lower HIV-1 viral set point. HCP5 is highly expressed in lymphoid tissues, spleen and activated lymphocytes, as well as B-cell and natural killer (NK) cell lines.

REFERENCES

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2. Avoustin, P., et al. 1994. Non-homologous recombination within the major histocompatibility complex creates a transcribed hybrid sequence. Mamm. Genome 5: 771-776.
3. Kulski, J.K. and Dawkins, R.L. 1999. The P5 multicopy gene family in the MHC is related in sequence to human endogenous retroviruses HERV-L and HERV-16. Immunogenetics 49: 404-412.
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5. Daly, A.K., et al. 2009. HLA-B*5701 genotype is a major determinant of drug-induced liver injury due to flucloxacillin. Nat. Genet. 41: 816-819.
6. Bozek, A., et al. 2010. HLA status in patients with chronic spontaneous urticaria. Int. Arch. Allergy Immunol. 153: 419-423.
7. Rodríguez-Nóvoa, S., et al. 2010. Use of the HCP5 single nucleotide polymorphism to predict hypersensitivity reactions to abacavir: correlation with HLA-B*5701. J. Antimicrob. Chemother. 65: 1567-1569.
8. Pereyra, F., et al. 2010. The major genetic determinants of HIV-1 control affect HLA class I peptide presentation. Science 330: 1551-1557.
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CHROMOSOMAL LOCATION

Genetic locus: HCP5 (human) mapping to 6p21.33.

PROTOCOLS

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

PRODUCT

HCP5 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 HCP5 shRNA Plasmid (h): sc-95129-SH and HCP5 shRNA (h) Lentiviral Particles: sc-95129-V as alternate gene silencing products.

For independent verification of HCP5 (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-95129A, sc-95129B and sc-95129C.

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

HCP5 siRNA (h) is recommended for the inhibition of HCP5 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor HCP5 gene expression knockdown using RT-PCR Primer: HCP5 (h)-PR: sc-95129-PR (20 µl). 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.