SANTA CRUZ BIOTECHNOLOGY, INC.

HHLA2 siRNA (h): sc-78498

BACKGROUND

Human endogenous retroviruses (HERVs) are repetitive elements that are derived from ancient germline retroviral infections. Due to their ability to move and insert next to certain genes and alter expression patterns, HERVs have been linked to several chronic diseases such as nervous systemic diseases, cancer, autoimmune and connective tissue diseases. The HERV-H family is the most abundant HERV family and has been implicated in the expression of a variety of adjacent genes. Proteins belonging to the HERV-H family are divided into one major and two minor groups based on sequence divergence. As a member of the HERV-H family, HHLA2 (HERV-H LTR-associating protein 2) is a 414 amino acid single-pass type I membrane protein that contains one Ig-like C1-type (immunoglobulin-like) domain and two Ig-like V-type (immunoglobulin-like) domains. HHLA2 is primarily expressed in kidney, lung and intestinal tissues.

REFERENCES

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4. Mager, D.L., et al. 1999. Endogenous retroviruses provide the primary polyadenylation signal for two new human genes (HHLA2 and HHLA3). Genomics 59: 255-263.
5. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 604371. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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7. Yi, J.M. and Kim, H.S. 2004. Evolutionary implication of human endogenous retrovirus HERV-H family. J. Hum. Genet. 49: 215-219.
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CHROMOSOMAL LOCATION

Genetic locus: HHLA2 (human) mapping to 3q13.13.

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.

PRODUCT

HHLA2 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 HHLA2 shRNA Plasmid (h): sc-78498-SH and HHLA2 shRNA (h) Lentiviral Particles: sc-78498-V as alternate gene silencing products.

For independent verification of HHLA2 (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-78498A, sc-78498B and sc-78498C.

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

HHLA2 siRNA (h) is recommended for the inhibition of HHLA2 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 HHLA2 gene expression knockdown using RT-PCR Primer: HHLA2 (h)-PR: sc-78498-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.