SANTA CRUZ BIOTECHNOLOGY, INC.

HISPPD1 siRNA (h): sc-91902

BACKGROUND

HISPPD1 (histidine acid phosphatase domain-containing protein 1), also known as PPIP5K2 (diphosphoinositol pentakisphosphate kinase 2), VIP2 or KIAA0433, is a 1,243 amino acid cytoplasmic protein that belongs to the histidine acid phosphatase family and VIP1 subfamily. Acting as an inositol kinase, HISPPD1 catalyzes the formation of diphosphoinositol pentakisphosphate (InsP7) and bi-diphosphoinositol tetrakisphosphate (InsP8) by converting inositolitol hexakisphosphate (InsP6) into InsP7, and InsP7 into InsP8. Existing as two alternatively spliced isoforms, the gene encoding HISPPD1 maps to human chromosome 5q21.1 and mouse chromosome 1 D. Chromosome 5 contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm or of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

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3. Fridy, P.C., et al. 2007. Cloning and characterization of two human VIP1-like inositol hexakisphosphate and diphosphoinositol pentakisphosphate kinases. J. Biol. Chem. 282: 30754-30762.
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5. Vera-Carbonell, A., et al. 2009. Characterization of a *de novo* complex chromosomal rearrangement in a patient with cri-du-chat and trisomy 5p syndromes. Am. J. Med. Genet. A 149A: 2513-2521.
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7. Lin, H., et al. 2009. Structural analysis and detection of biological inositol pyrophosphates reveal that the family of VIP/diphosphoinositol pentakisphosphate kinases are 1/3-kinases. J. Biol. Chem. 284: 1863-1872.
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CHROMOSOMAL LOCATION

Genetic locus: PPIP5K2 (human) mapping to 5q21.1.

PROTOCOLS

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

PRODUCT

HISPPD1 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 HISPPD1 shRNA Plasmid (h): sc-91902-SH and HISPPD1 shRNA (h) Lentiviral Particles: sc-91902-V as alternate gene silencing products.

For independent verification of HISPPD1 (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-91902A, sc-91902B and sc-91902C.

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

HISPPD1 siRNA (h) is recommended for the inhibition of HISPPD1 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 HISPPD1 gene expression knockdown using RT-PCR Primer: HISPPD1 (h)-PR: sc-91902-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.