SANTA CRUZ BIOTECHNOLOGY, INC.

IGIP siRNA (h): sc-92049

BACKGROUND

IGIP (IgA-inducing protein homolog) is a 53 amino acid secreted protein that enhances IgA secretion from B-cells stimulated by CD40. The gene encoding IGIP consists of approximately 2,871 bases and maps to human chromosome 5q31.3. With 181 million base pairs, chromosome 5 comprises nearly 6% of the human genome. Chromosome 5 is associated with Cockayne syndrome through the ERCC8 gene and familial adenomatous polyposis through the adenomatous polyposis coli (APC) tumor suppressor gene. Treacher Collins syndrome is also chromosome 5-associated and is caused by insertions or deletions within the TCOF1 gene. 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

1. Edwards, S.J., Gladwin, A.J. and Dixon, M.J. 1997. The mutational spectrum in Treacher Collins syndrome reveals a predominance of mutations that create a premature-termination codon. Am. J. Hum. Genet. 60: 515-524.
2. Austin, A.S., Haas, K.M., Naugler, S.M., Bajer, A.A., Garcia-Tapia, D. and Estes, D.M. 2003. Identification and characterization of a novel regulatory factor: IgA-inducing protein. J. Immunol. 171: 1336-1342.
3. Finch, R., Moore, H.G., Lindor, N., Jalal, S.M., Markowitz, A., Suresh, J., Offit, K. and Guillem, J.G. 2005. Familial adenomatous polyposis and mental retardation caused by a *de novo* chromosomal deletion at 5q15-q22: report of a case. Dis. Colon Rectum 48: 2148-2152.
4. Anindya, R., Aygün, O. and Svejstrup, J.Q. 2007. Damage-induced ubiquitylation of human RNA polymerase II by the ubiquitin ligase Nedd4, but not Cockayne syndrome proteins or BRCA1. Mol. Cell 28: 386-397.
5. Vera-Carbonell, A., Bafalliu, J.A., Guillén-Navarro, E., Escalona, A., Ballesta-Martinez, M.J., Fuster, C., Fernández, A. and López-Expósito, I. 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.
6. Ravandi, F., Issa, J.P., Garcia-Manero, G., O'Brien, S., Pierce, S., Shan, J., Borthakur, G., Verstovsek, S., Faderl, S., Cortes, J. and Kantarjian, H. 2009. Superior outcome with hypomethylating therapy in patients with acute myeloid leukemia and high-risk myelodysplastic syndrome and chromosome 5 and 7 abnormalities. Cancer 115: 5746-5751.
7. Sazawal, S., Kumar, B., Hasan, S.K., Dutta, P., Kumar, R., Chaubey, R., Mir, R. and Saxena, R. 2009. Haematological & molecular profile of acute myelogenous leukaemia in India. Indian J. Med. Res. 129: 256-261.

CHROMOSOMAL LOCATION

Genetic locus: IGIP (human) mapping to 5q31.3.

PROTOCOLS

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

PRODUCT

IGIP 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 IGIP shRNA Plasmid (h): sc-92049-SH and IGIP shRNA (h) Lentiviral Particles: sc-92049-V as alternate gene silencing products.

For independent verification of IGIP (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-92049A, sc-92049B and sc-92049C.

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

IGIP siRNA (h) is recommended for the inhibition of IGIP 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 IGIP gene expression knockdown using RT-PCR Primer: IGIP (h)-PR: sc-92049-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.