

LEAP-2 siRNA (m): sc-146696

BACKGROUND

LEAP-2 (liver expressed antimicrobial peptide 2) is a 77 amino acid cationic protein that possesses antimicrobial activity and belongs to the LEAP2 family. Highly conserved among mammals, LEAP-2 exists as multiple alternatively spliced variants and is suggested to have a role in innate immune responses. The gene encoding LEAP-2 maps to human chromosome 5, which 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

1. Krause, A., Sillard, R., Kleemeier, B., Klüver, E., Maronde, E., Conejo-García, J.R., Forssmann, W.G., Schulz-Knappe, P., Nehls, M.C., Wattler, F., Wattler, S. and Adermann, K. 2003. Isolation and biochemical characterization of LEAP-2, a novel blood peptide expressed in the liver. *Protein Sci.* 12: 143-152.
2. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611373. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Murru, D., Boccone, L., Ristaldi, M.S. and Nucaro, A.L. 2008. Cri du chat mosaicism: an unusual case of partial deletion and partial deletion/duplication of the short arm of chromosome 5, leading to an unusual cri du chat phenotype. *Genet. Couns.* 19: 381-386.
4. 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.
5. Eisenmann, K.M., Dykema, K.J., Matheson, S.F., Kent, N.F., DeWard, A.D., West, R.A., Tibes, R., Furge, K.A. and Alberts, A.S. 2009. 5q-myelodysplastic syndromes: chromosome 5q genes direct a tumor-suppression network sensing actin dynamics. *Oncogene* 28: 3429-3441.
6. Howard, A., Townes, C., Milona, P., Nile, C.J., Michailidis, G. and Hall, J. 2010. Expression and functional analyses of liver expressed antimicrobial peptide-2 (LEAP-2) variant forms in human tissues. *Cell. Immunol.* 261: 128-133.
7. Wang, J.C. and Khan, A. 2010. Large distal 5p deletion with hemifacial microsomia and absence of cri-du-chat syndrome. *Clin. Dysmorphol.* 19: 38-39.
8. Yamamoto, K., Wakahashi, K., Okamura, A., Katayama, Y., Shimoyama, M. and Matsui, T. 2010. Two further cases of myelodysplastic syndrome and acute myeloid leukemia with der(5;19)(p10;q10): association with abnormalities involving chromosomes 12 and 21. *Leuk. Res.* 34: e38-e41.
9. Hocquellet, A., Odaert, B., Cabanne, C., Noubhani, A., Dieryck, W., Joucla, G., Le Senechal, C., Milenkov, M., Chaignepain, S., Schmitter, J.M., Claverol, S., Santarelli, X., Dufourc, E.J., Bonneau, M., Garbay, B. and Costaglioli, P. 2010. Structure-activity relationship of human liver-expressed antimicrobial peptide 2. *Peptides* 31: 58-66.

CHROMOSOMAL LOCATION

Genetic locus: Leap2 (mouse) mapping to 11 B1.3.

PRODUCT

LEAP-2 siRNA (m) is a target-specific 19-25 nt siRNA 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 LEAP-2 shRNA Plasmid (m): sc-146696-SH and LEAP-2 shRNA (m) Lentiviral Particles: sc-146696-V as alternate gene silencing products.

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

LEAP-2 siRNA (m) is recommended for the inhibition of LEAP-2 expression in mouse 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.

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.