

LCRISP2 siRNA (m): sc-146687

BACKGROUND

Cysteine-rich secretory proteins (CRISPs) represent a family of evolutionarily conserved proteins that may play a role in the innate immune system and are transcriptionally regulated by androgens in several tissues. CRISP proteins are highly expressed in the mammalian reproductive tract and in the venom secretory ducts of some reptiles. CRISP-11 (cysteine-rich secretory protein 11), also known as cysteine-rich secretory protein LCCL domain-containing 2 (CRISPLD2 or LCRISP2), is a 497 amino acid protein containing two LCCL domains, which are thought to function as autonomous folding domains used to construct modular proteins through exon shuffling. Serum concentrations of CRISP-11 have been shown to be an indicator of a patient's exposure to lipopolysaccharide (LPS), the immunostimulatory component of Gram-negative bacteria, and can determine one's sensitivity to it.

REFERENCES

1. Trexler, M., Bányaí, L. and Patthy, L. 2000. The LCCL module. *Eur. J. Biochem.* 267: 5751-5757.
2. Chiquet, B.T., Lidral, A.C., Stal, S., Mulliken, J.B., Moreno, L.M., Arcos-Burgos, M., Arco-Burgos, M., Valencia-Ramirez, C., Blanton, S.H. and Hecht, J.T. 2007. CRISPLD2: a novel NSCLP candidate gene. *Hum. Mol. Genet.* 16: 2241-2248.
3. Gibbs, G.M. and O'Bryan, M.K. 2007. Cysteine rich secretory proteins in reproduction and venom. *Soc. Reprod. Fertil. Suppl.* 65: 261-267.
4. Vadnais, M.L., Foster, D.N. and Roberts, K.P. 2008. Molecular cloning and expression of the CRISP family of proteins in the boar. *Biol. Reprod.* 79: 1129-1134.
5. Reddy, T., Gibbs, G.M., Merriner, D.J., Kerr, J.B. and O'Bryan, M.K. 2008. Cysteine-rich secretory proteins are not exclusively expressed in the male reproductive tract. *Dev. Dyn.* 237: 3313-3323.
6. Gibbs, G.M., Roelants, K. and O'Bryan, M.K. 2008. The CAP superfamily: cysteine-rich secretory proteins, antigen 5, and pathogenesis-related 1 proteins—roles in reproduction, cancer, and immune defense. *Endocr. Rev.* 29: 865-897.
7. Cohen, D.J., Busso, D., Da Ros, V., Ellerman, D.A., Maldera, J.A., Goldweic, N. and Cuasnicu, P.S. 2008. Participation of cysteine-rich secretory proteins (CRISP) in mammalian sperm-egg interaction. *Int. J. Dev. Biol.* 52: 737-742.
8. Ramazanov, A.S., Starkov, V.G., Osipov, A.V., Ziganshin, R.H., Filkin, S.Y., Tsetlin, V.I. and Utkin, Y.N. 2008. Cysteine-rich venom proteins from the snakes of Viperinae subfamily-molecular cloning and phylogenetic relationship. *Toxicon* 53: 162-168.
9. Wang, Z.Q., Xing, W.M., Fan, H.H., Wang, K.S., Zhang, H.K., Wang, Q.W., Qi, J., Yang, H.M., Yang, J., Ren, Y.N., Cui, S.J., Zhang, X., Liu, F., Lin, D.H., Wang, W.H., Hoffmann, M.K. and Han, Z.G. 2009. The novel lipopolysaccharide-binding protein CRISPLD2 is a critical serum protein to regulate endotoxin function. *J. Immunol.* 183: 6646-6656.

CHROMOSOMAL LOCATION

Genetic locus: Crispld2 (mouse) mapping to 8 E1.

PRODUCT

LCRISP2 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 LCRISP2 shRNA Plasmid (m): sc-146687-SH and LCRISP2 shRNA (m) Lentiviral Particles: sc-146687-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

LCRISP2 siRNA (m) is recommended for the inhibition of LCRISP2 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LCRISP2 gene expression knockdown using RT-PCR Primer: LCRISP2 (m)-PR: sc-146687-PR (20 μ l). 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.

PROTOCOLS

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