SANTA CRUZ BIOTECHNOLOGY, INC.

SSc5D siRNA (m): sc-140645

BACKGROUND

Scavenger receptor cysteine-rich superfamily (SRCR-SF) members are transmembrane or secreted receptors that contain one or several repeats of a cysteine-rich protein module and are known to have diverse functions that include pathogen recognition and immunoregulation. SSc5D (scavenger receptor cysteine rich domain containing (five domains)), also known as soluble scavenger protein with five SRCR domains, is a 1,573 amino acid secreted and cytoplasmic protein that belongs to the scavenger receptor cysteine-rich superfamily. Inter-actions with extracellular matrix proteins, galectin-1 and Laminin, suggest that SSc5D may play a role in the defense and homeostasis of host epithelial surface. SSc5D may act as a pattern recognition receptor (PPR) because of its interaction with pathogen-associated molecular patterns (PAMPs) present on the cell walls of Gram-positive and Gram-negative bacteria and fungi, inducing bacterial and fungal aggregation and subsequent inhibition of PAMP-induced cytokine release. Highly expressed in placenta and spleen, SSc5D is expressed at lower levels in colon, lung, heart and kidney. SSc5D exists as two alternatviely spliced isoforms and is encoded by a gene located on human chromosome 19q13.42.

REFERENCES

1. McAlister, M.S., et al. 1998. NMR analysis of the N-terminal SRCR domain of human CD5: engineering of a glycoprotein for superior characteristics in NMR experiments. Protein Eng. 11: 847-853.
2. Droste, A., et al. 1999. Shedding of CD163, a novel regulatory mechanism for a member of the scavenger receptor cysteine-rich family. Biochem. Biophys. Res. Commun. 256: 110-113.
3. Sarrias, M.R., et al. 2004. The Scavenger Receptor Cysteine-Rich (SRCR) domain: an ancient and highly conserved protein module of the innate immune system. Crit. Rev. Immunol. 24: 1-37.
4. Gonçalves, C.M., et al. 2009. Molecular cloning and analysis of SSc5D, a new member of the scavenger receptor cysteine-rich superfamily. Mol. Immunol. 46: 2585-2596.
5. Miró-Julià, C., et al. 2011. Molecular and functional characterization of mouse S5D-SRCRB: a new group B member of the scavenger receptor cysteine-rich superfamily. J. Immunol. 186: 2344-2354.

CHROMOSOMAL LOCATION

Genetic locus: Ssc5d (mouse) mapping to 7 A1.

PRODUCT

SSc5D 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SSc5D shRNA Plasmid (m): sc-140645-SH and SSc5D shRNA (m) Lentiviral Particles: sc-140645-V as alternate gene silencing products.

PROTOCOLS

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

SSc5D siRNA (m) is recommended for the inhibition of SSc5D 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 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 SSc5D gene expression knockdown using RT-PCR Primer: SSc5D (m)-PR: sc-140645-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.