SANTA CRUZ BIOTECHNOLOGY, INC.

SARM siRNA (m): sc-62977

BACKGROUND

SARM (sterile α and TIR motif), also known as SAMD2, SARM1 or KIAA0524, is a 724 amino acid protein that localizes to the cytoplasm and contains one TIR domain and 2 sterile α motif (SAM) domains. Expressed predominately in liver and kidney and present at lower levels in placenta, SARM interacts with TICAM-1 and, via this interaction, blocks the transcriptional activation activity of TICAM-1 and functions as a negative regulator of Toll-like receptor signaling. Additionally, SARM is thought to be involved in innate immune responses and may also play a role in the negative regulation of NFκB activation. SARM exists as two alternatively spliced isoforms that are encoded by a gene which maps to human chromosome 17.

REFERENCES

1. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. IX. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 5: 31-39.
2. Mink, M., et al. 2001. A novel human gene (SARM) at chromosome 17q11 encodes a protein with a SAM motif and structural similarity to Armadillo/β-catenin that is conserved in mouse, *Drosophila* and *Caenorhabditis elegans*. Genomics 74: 234-244.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607732. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Liberati, N.T., et al. 2004. Requirement for a conserved Toll/interleukin-1 resistance domain protein in the *Caenorhabditis elegans* immune response. Proc. Natl. Acad. Sci. USA 101: 6593-6598.
5. Carty, M., et al. 2006. The human adaptor SARM negatively regulates adaptor protein TRIF-dependent Toll-like receptor signaling. Nat. Immunol. 7: 1074-1081.

CHROMOSOMAL LOCATION

Genetic locus: Sarm1 (mouse) mapping to 11 B5.

PRODUCT

SARM siRNA (m) 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 SARM shRNA Plasmid (m): sc-62977-SH and SARM shRNA (m) Lentiviral Particles: sc-62977-V as alternate gene silencing products.

For independent verification of SARM (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-62977A, sc-62977B and sc-62977C.

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

SARM siRNA (m) is recommended for the inhibition of SARM 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 SARM gene expression knockdown using RT-PCR Primer: SARM (m)-PR: sc-62977-PR (20 µl, 501 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Xue, X., et al. 2012. Riccardin D, a novel macrocyclic bisbibenzyl, induces apoptosis of human leukemia cells by targeting DNA topoisomerase II. Invest. New Drugs 30: 212-222.

RESEARCH USE

For research use only, not for use in diagnostic procedures.