SANTA CRUZ BIOTECHNOLOGY, INC.

JAML siRNA (h): sc-75353

BACKGROUND

JAML (adhesion molecule, interacts with CXADR antigen 1), also known as junctional adhesion molecule-like, dendritic cell-specific protein CREA7-1, UNQ722/PRO1387, CREA7-4, AMICA1, Gm638, CREA7-1, FLJ37080, MGC118815 or MGC118814, is a 394 amino acid single-pass type I membrane protein and novel adhesion molecule with localization at the cell plasma membrane in regions of cell-to-cell contact but not free cell borders, implying that JAML participates in homophilic interactions. JAML belongs to the immunoglobulin superfamily and is expressed in peripheral blood leukocytes, bone marrow, spleen, lymph nodes and fetal thymus, liver and spleen. JAML assists in the migration of leukocytes through endothelilal and epithelial tissues, mediates binding with CAR (coxsackie and adenovirus receptor) via its Ig-like V-type domain 2, and strengthens the binding of leukocytes to endothelial cells. Consisting of a transmembrane segment, cytoplasmic tail, 19-amino acid signal peptide and two extracellular immunoglobulin-like domains, JAML also undergoes alternative splicing resulting in three isoforms and is encoded by a gene mapping to human chromosome 11q23.3.

REFERENCES

1. Moog-Lutz, C., et al. 2003. JAML, a novel protein with characteristics of a junctional adhesion molecule, is induced during differentiation of myeloid leukemia cells. Blood 102: 3371-3378.
2. Zen, K., et al. 2005. Neutrophil migration across tight junctions is mediated by adhesive interactions between epithelial coxsackie and adenovirus receptor and a junctional adhesion molecule-like protein on neutrophils. Mol. Biol. Cell 16: 2694-2703.
3. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609770. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Mirza, M., et al. 2007. Coxsackievirus and adenovirus receptor is upregulated in migratory germ cells during passage of the blood-testis barrier. Endocrinology 148: 5459-5469.

CHROMOSOMAL LOCATION

Genetic locus: AMICA1 (human) mapping to 11q23.3.

PRODUCT

JAML 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 JAML shRNA Plasmid (h): sc-75353-SH and JAML shRNA (h) Lentiviral Particles: sc-75353-V as alternate gene silencing products.

For independent verification of JAML (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-75353A, sc-75353B and sc-75353C.

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

JAML siRNA (h) is recommended for the inhibition of JAML 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 JAML gene expression knockdown using RT-PCR Primer: JAML (h)-PR: sc-75353-PR (20 µl, 555 bp). 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.