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SANTA CRUZ BIOTECHNOLOGY, INC.

murinoglobulin 1 siRNA (m): sc-149719

BACKGROUND

Murinoglobulin 1, also known as Mug1, is a 1,476 amino acid heavily glycosylated secretory protein belonging to the protease inhibitor I39 (α-2-macroglobulin) family and found in mouse plasma. Murinoglobulin 1 inhibits trypsin, papain, and thermolysin, similar to mouse α-macroglobulin and human α-2-macroglobulin, however murinoglobulin 1 is inactivated at pH 5.5 where the other two remain active. Murinoglobulin 1 is also thought to play an important role in inflammation and immune modulation. Mice that are deficient in both murinoglobulin 1 and mouse α-2 macroglobulin were found to be viable, fertile and phenotypically normal, unless stressed, and in the case of induced acute pancreatitis the deficient mice were found to have higher mortality rates than wildtype mice. Murinoglobulin 1 and mouse α-2-macroglobulin are also suggested to play a role in trophoblast positioning in mouse implantation sites.

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8. Waghabi, M.C., et al. 2002. Increased *Trypanosoma cruzi* invasion and heart fibrosis associated with high transforming growth factor β levels in mice deficient in α-2-macroglobulin. Infect. Immun. 70: 5115-5123.
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CHROMOSOMAL LOCATION

Genetic locus: Mug1 (mouse) mapping to 6 F1.

PROTOCOLS

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

PRODUCT

murinoglobulin 1 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 murinoglobulin 1 shRNA Plasmid (m): sc-149719-SH and murinoglobulin 1 shRNA (m) Lentiviral Particles: sc-149719-V as alternate gene silencing products.

For independent verification of murinoglobulin 1 (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-149719A, sc-149719B and sc-149719C.

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

murinoglobulin 1 siRNA (m) is recommended for the inhibition of murinoglobulin 1 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 murinoglobulin 1 gene expression knockdown using RT-PCR Primer: murinoglobulin 1 (m)-PR: sc-149719-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.