SANTA CRUZ BIOTECHNOLOGY, INC.

ADRM1 siRNA (h): sc-72453

BACKGROUND

ADRM1 (adhesion-regulating molecule 1), also known as GP110, ARM-1 or Rpn13, is a 407 amino acid protein that localizes to both the nucleus and the cytoplasm and is thought to be involved in protein recruitment and cell adhesion. An integral membrane protein, ADRM1 functions to recruit UCH-L5, a deubiquitinating enzyme, to the 26S proteasome, and once at the proteasome it promotes the activity of UCH-L5. Additionally, ADRM1 is thought to mediate lymphocyte adhesion in endothelial cells and may thus play a role in lymphocyte homing. ADRM1 expression is induced by IFN-γ in some cancer cell lines and its expression is upregulated in other metastatic cells, suggesting a role in carcinogenesis. Two isoforms of ADRM1 exist due to alternative splicing events.

REFERENCES

1. Shimada, S., et al. 1994. Molecular cloning and characterization of the complementary DNA of an M_r 110,000 antigen expressed by human gastric carcinoma cells and upregulated by γ-interferon. Cancer Res. 54: 3831-3836.
2. Simins, A.B., et al. 1999. Functional cloning of ARM-1, an adhesion-regulating molecule upregulated in metastatic tumor cells. Clin. Exp. Metastasis 17: 641-648.
3. Lamerant, N. and Kieda, C. 2005. Adhesion properties of adhesion-regulating molecule 1 protein on endothelial cells. FEBS J. 272: 1833-1844.
4. Hamazaki, J., et al. 2006. A novel proteasome interacting protein recruits the deubiquitinating enzyme UCH37 to 26S proteasomes. EMBO J. 25: 4524-4536.

CHROMOSOMAL LOCATION

Genetic locus: ADRM1 (human) mapping to 20q13.33.

PRODUCT

ADRM1 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 ADRM1 shRNA Plasmid (h): sc-72453-SH and ADRM1 shRNA (h) Lentiviral Particles: sc-72453-V as alternate gene silencing products.

For independent verification of ADRM1 (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-72453A, sc-72453B and sc-72453C.

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

ADRM1 siRNA (h) is recommended for the inhibition of ADRM1 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.

GENE EXPRESSION MONITORING

ADRM1 (D-12): sc-271398 is recommended as a control antibody for monitoring of ADRM1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ADRM1 gene expression knockdown using RT-PCR Primer: ADRM1 (h)-PR: sc-72453-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Huang, Y. and Ratovitski, E.A. 2010. Phosphorylated TP63 induces transcription of RPN13, leading to NOS2 protein degradation. J. Biol. Chem. 285: 41422-41431.
2. Huang, Y. and Ratovitski, E.A. 2010. Phospho-ΔNp63α/Rpn13-dependent regulation of LKB1 degradation modulates autophagy in cancer cells. Aging 2: 959-968.

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.