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- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
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SANTA CRUZ BIOTECHNOLOGY, INC.

MTDH siRNA (m): sc-149671

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MTDH (metastasis adhesion protein), also known as astrocyte elevated gene-1 protein (AEG1) or lysine-rich CEACAM1 co-isolated protein (LYRIC), is a 582 amino acid single-pass membrane protein. Overexpressed in various cancers, MTDH activates the transcription factor NFκB and promotes anchorage-independent growth of immortalized astrocytes and melanocytes, which are key components of tumor growth. MTDH is also thought to enhance the seeding of tumor cells to the target organ endothelium. Localized mainly to the endoplasmic reticulum membrane, MTDH also translocates from the cytoplasm to the nucleus when induced by TNFα. MTDH also localizes to tight junctions (TJ) during the maturation of TJ complexes in epithelial cells. MTDH is found at highest levels in heart, skeletal muscle, tongue and small intestine.

REFERENCES

1. Kang, D.C., et al. 2005. Cloning and characterization of HIV-1-inducible astrocyte elevated gene-1, AEG-1. Gene 353: 8-15.
2. Emdad, L., et al. 2006. Activation of the nuclear factor κB pathway by astrocyte elevated gene-1: implications for tumor progression and metastasis. Cancer Res. 66: 1509-1516.
3. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610323. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Kikuno, N., et al. 2007. Knockdown of astrocyte-elevated gene-1 inhibits prostate cancer progression through upregulation of FOXO3a activity. Oncogene 26: 7647-7655.
5. Emdad, L., et al. 2007. Astrocyte elevated gene-1: recent insights into a novel gene involved in tumor progression, metastasis and neurodegeneration. Pharmacol. Ther. 114: 155-170.
6. Ash, S.C., et al. 2008. LYRIC/AEG-1 overexpression modulates BCCIPα protein levels in prostate tumor cells. Biochem. Biophys. Res. Commun. 371: 333-338.

CHROMOSOMAL LOCATION

Genetic locus: Mtdh (mouse) mapping to 15 B3.1.

PRODUCT

MTDH 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 MTDH shRNA Plasmid (m): sc-149671-SH and MTDH shRNA (m) Lentiviral Particles: sc-149671-V as alternate gene silencing products.

For independent verification of MTDH (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-149671A, sc-149671B and sc-149671C.

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

MTDH siRNA (m) is recommended for the inhibition of MTDH 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 MTDH gene expression knockdown using RT-PCR Primer: MTDH (m)-PR: sc-149671-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.