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SANTA CRUZ BIOTECHNOLOGY, INC.

METTL4 siRNA (m): sc-149388

BACKGROUND

METTL4 (Methyltransferase-like protein 4) is a 472 amino acid enzyme that belongs to the MT-A70-like family. Other members of this family have enzymatic activity that results in the transfer of a methyl group to and from DNA, RNA or amino acids. The gene encoding METTL4 maps to chromosome 18, which houses over 300 protein-coding genes and contains nearly 76 million bases, representing about 2.5% of total DNA in cells. There are a variety of diseases associated with defects in chromosome 18-localized genes, some of which include Niemann-Pick disease, hereditary hemorrhagic telangiectasia, erythropoietic protoporphyria and follicular lymphomas. Also, three chromosomal abnormalities result from meiotic nondisjunction events of chromosome 18: Monosomy 18p, Trisomy 18 (also known as Edwards syndrome) and Tetrasomy 18p.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Mettl4 (mouse) mapping to 17 E5.

PRODUCT

METTL4 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 METTL4 shRNA Plasmid (m): sc-149388-SH and METTL4 shRNA (m) Lentiviral Particles: sc-149388-V as alternate gene silencing products.

For independent verification of METTL4 (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-149388A, sc-149388B and sc-149388C.

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

METTL4 siRNA (m) is recommended for the inhibition of METTL4 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 METTL4 gene expression knockdown using RT-PCR Primer: METTL4 (m)-PR: sc-149388-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.

PROTOCOLS

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