

METTL2 siRNA (m): sc-149386

BACKGROUND

METTL2 (methyltransferase-like protein 2) is a 389 amino acid mouse protein that belongs to the methyltransferase superfamily and the METL family. Acting as a methyltransferase, METTL2 exists as two alternatively spliced isoforms. The human homolog of this protein, METTL2, also known as METTL2A, is a 378 amino acid protein that also exists as two alternatively spliced isoforms. The gene that encodes METTL2 maps to mouse chromosome 11 E1 and human chromosome 17q23. Comprising over 2.5% of the human genome, chromosome 17 consists of about 81 million bases, encodes over 1,200 genes and has the highest gene density in the genome. Chromosome 17 is also enriched in segmental duplications, ranking third in density among the autosomes.

REFERENCES

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- Varley, J.M., et al. 1997. A detailed study of loss of heterozygosity on chromosome 17 in tumours from Li-Fraumeni patients carrying a mutation to the TP53 gene. *Oncogene* 14: 865-871.
- Kersemaekers, A.M., et al. 1998. Loss of heterozygosity for defined regions on chromosomes 3, 11 and 17 in carcinomas of the uterine cervix. *Br. J. Cancer* 77: 192-200.
- Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. *Hum. Mutat.* 15: 105-113.
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CHROMOSOMAL LOCATION

Genetic locus: *Mettl2* (mouse) mapping to 11 E1.

PRODUCT

METTL2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see METTL2 shRNA Plasmid (m): sc-149386-SH and METTL2 shRNA (m) Lentiviral Particles: sc-149386-V as alternate gene silencing products.

For independent verification of METTL2 (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-149386A, sc-149386B and sc-149386C.

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.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

METTL2 siRNA (m) is recommended for the inhibition of METTL2 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 μ M in 66 μ l. 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 METTL2 gene expression knockdown using RT-PCR Primer: METTL2 (m)-PR: sc-149386-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.