

# METTL7A siRNA (h): sc-95742

## BACKGROUND

METTL7A (methyltransferase like 7A), also known as AAM-B, is a 244 amino acid protein that is thought to function as a methyltransferase and is encoded by a gene which maps to chromosome 12. Encoding over 1,100 genes, chromosome 12 comprises nearly 4.5% of the human genome and is associated with a number of skeletal deformities, including hypochondrogenesis, achondrogenesis and Kniest dysplasia. Chromosome 12 is also home to both a homeobox gene cluster which encodes crucial transcription factors for morphogenesis, and a natural killer complex gene cluster encoding C-type lectin proteins which mediate the NK cell response to MHC I interaction. Additionally, Trisomy 12p (three copies of the p arm of chromosome 12) leads to facial developmental defects, seizure disorders and a host of other symptoms varying in severity depending on the extent of mosaicism.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: METTL7A (human) mapping to 12q13.12.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

METTL7A 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see METTL7A shRNA Plasmid (h): sc-95742-SH and METTL7A shRNA (h) Lentiviral Particles: sc-95742-V as alternate gene silencing products.

For independent verification of METTL7A (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-95742A, sc-95742B and sc-95742C.

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

## APPLICATIONS

METTL7A siRNA (h) is recommended for the inhibition of METTL7A 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  $\mu$ M in 66  $\mu$ 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 METTL7A gene expression knockdown using RT-PCR Primer: METTL7A (h)-PR: sc-95742-PR (20  $\mu$ l, 592 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.