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# YTHDC2 siRNA (m): sc-155422

## BACKGROUND

YTHDC2 (YTH domain containing 2), also known as probable ATP-dependent RNA helicase YTHDC2, is a 1,430 amino acid protein. Belonging to the DEAD box helicase family and DEAH subfamily, YTHDC2 contains two ANK repeats, a helicase ATP-binding domain, helicase C-terminal domain, R3H domain and a YTH domain, a potential RNA binding domain. The gene encoding YTHDC2 maps to human chromosome 5q22.2 and mouse chromosome 18 B3. With 181 million base pairs encoding around 1,000 genes, chromosome 5 make up approximately 6% of human genomic DNA. Chromosome 5 is associated with Cockayne syndrome through the ERCC8 gene and familial adenomatous polyposis through the adenomatous polyposis coli (APC) tumor suppressor gene. Treacher Collins syndrome is also chromosome 5 associated and is caused by insertions or deletions within the TCOF1 gene.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: *Ythdc2* (mouse) mapping to 18 B3.

## PRODUCT

YTHDC2 siRNA (m) is a target-specific 19-25 nt siRNA 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 YTHDC2 shRNA Plasmid (m): sc-155422-SH and YTHDC2 shRNA (m) Lentiviral Particles: sc-155422-V as alternate gene silencing 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  $\mu$ 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

YTHDC2 siRNA (m) is recommended for the inhibition of YTHDC2 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  $\mu$ 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 YTHDC2 gene expression knockdown using RT-PCR Primer: YTHDC2 (m)-PR: sc-155422-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.