

# GMPR2 siRNA (m): sc-145651

## BACKGROUND

GMPR2 (GMP reductase 2), also known as guanosine 5'-monophosphate oxidoreductase 2, is a 348 amino acid protein that belongs to the IMPDH/GMPR family. GMPR2 catalyzes the irreversible NADPH-dependent reductive deamination of GMP to IMP and plays a role in modulating cellular differentiation. GMPR2 is also involved in the conversion of nucleobase, nucleoside and nucleotide derivatives of G to A nucleotides, and maintains the intracellular balance of A and G nucleotides. GMPR2 is highly expressed in heart, skeletal muscle, kidney, brain, liver, prostate, spleen, placenta, testis and ovary, with lower levels in colon, thymus and peripheral blood leukocytes. The gene encoding GMPR2 maps to human chromosome 14q12.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Gmpr2 (mouse) mapping to 14 C3.

## PRODUCT

GMPR2 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 GMPR2 shRNA Plasmid (m): sc-145651-SH and GMPR2 shRNA (m) Lentiviral Particles: sc-145651-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

GMPR2 siRNA (m) is recommended for the inhibition of GMPR2 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 GMPR2 gene expression knockdown using RT-PCR Primer: GMPR2 (m)-PR: sc-145651-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.