SANTA CRUZ BIOTECHNOLOGY, INC.

# GPR35 siRNA (m): sc-75178

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

G protein-coupled receptors (GPRs), also known as seven transmembrane receptors, heptahelical receptors or 7TM receptors, comprise a superfamily of proteins that play a role in many different stimulus-response pathways. G protein-coupled receptors translate extracellular signals into intracellular signals (G protein-activation) and they respond to a variety of signaling molecules, such as hormones and neurotransmitters. GPR35 (G protein-coupled receptor 35) is a 309 amino acid multi-pass membrane protein that belongs to the G protein-coupled receptor 1 family. Expressed in adult and fetal tissues, including lung, pancreas, colon and intestine, GPR35 functions as an orphan receptor that is thought to play a role in signaling events throughout the cell.

## REFERENCES


1. Larhammar, D., et al. 1993. The receptor revolution—multiplicity of G protein-coupled receptors. Drug Des. Discov. 9: 179-188.
2. O'Dowd, B.F., et al. 1998. Discovery of three novel G protein-coupled receptor genes. Genomics 47: 310-313.
3. Ji, T.H., et al. 1998. G protein-coupled receptors. I. Diversity of receptor-ligand interactions. J. Biol. Chem. 273: 17299-17302.
4. Schöneberg, T., et al. 1999. Structural basis of G protein-coupled receptor function. Mol. Cell. Endocrinol. 151: 181-193.
5. Horikawa, Y., et al. 2000. Genetic variation in the gene encoding calpain-10 is associated with type 2 diabetes mellitus. Nat. Genet. 26: 163-175.
6. Okumura, S., et al. 2004. Cloning of a G protein-coupled receptor that shows an activity to transform NIH3T3 cells and is expressed in gastric cancer cells. Cancer Sci. 95: 131-135.
7. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 602646. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/


## CHROMOSOMAL LOCATION

Genetic locus: Gpr35 (mouse) mapping to 1 D.

## PRODUCT

GPR35 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 GPR35 shRNA Plasmid (m): sc-75178-SH and GPR35 shRNA (m) Lentiviral Particles: sc-75178-V as alternate gene silencing products.

For independent verification of GPR35 (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-75178A, sc-75178B and sc-75178C.

## 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 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

GPR35 siRNA (m) is recommended for the inhibition of GPR35 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 GPR35 gene expression knockdown using RT-PCR Primer: GPR35 (m)-PR: sc-75178-PR (20 µl, 591 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS


1. Shi, T., et al. 2022. Exercised accelerated the production of muscle-derived kynurenic acid in skeletal muscle and alleviated the postmenopausal osteoporosis through the GPR35/NFκB p65 pathway. J. Orthop. Translat. 35: 1-12.


## RESEARCH USE

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