



GPR15 siRNA (m): sc-145709

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. GPR15 (G protein-coupled receptor 15) is a 360 amino acid multi-pass membrane protein belonging to the G protein-coupled receptor 1 family. GPR15 is thought to function as a chemokine receptor and is encoded by a gene that maps to murine chromosome 16 C1.2.

REFERENCES

1. Larhammar, D., Blomqvist, A.G. and Wahlestedt, C. 1993. The receptor revolution—multiplicity of G protein-coupled receptors. *Drug Des. Discov.* 9: 179-188.
2. Hata, S., Emi, Y., Iyanagi, T. and Osumi, T. 1995. cDNA cloning of a putative G protein-coupled receptor from brain. *Biochim. Biophys. Acta* 1261: 121-125.
3. Ji, T.H., Grossmann, M. and Ji, I. 1998. G protein-coupled receptors. I. Diversity of receptor-ligand interactions. *J. Biol. Chem.* 273: 17299-17302.
4. Schöneberg, T., Schultz, G. and Gudermann, T. 1999. Structural basis of G protein-coupled receptor function. *Mol. Cell. Endocrinol.* 151: 181-193.
5. Lee, D.K., Nguyen, T., Lynch, K.R., Cheng, R., Vanti, W.B., Arkhitko, O., Lewis, T., Evans, J.F., George, S.R. and O'Dowd, B.F. 2001. Discovery and mapping of ten novel G protein-coupled receptor genes. *Gene* 275: 83-91.
6. Wittenberger, T., Schaller, H.C. and Hellebrand, S. 2001. An expressed sequence tag (EST) data mining strategy succeeding in the discovery of new G protein-coupled receptors. *J. Mol. Biol.* 307: 799-813.

CHROMOSOMAL LOCATION

Genetic locus: Gpr15 (mouse) mapping to 16 C1.2.

PRODUCT

GPR15 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GPR15 shRNA Plasmid (m): sc-145709-SH and GPR15 shRNA (m) Lentiviral Particles: sc-145709-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 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

GPR15 siRNA (m) is recommended for the inhibition of GPR15 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 GPR15 gene expression knockdown using RT-PCR Primer: GPR15 (m)-PR: sc-145709-PR (20 μ 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 for detailed protocols and support products.