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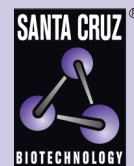
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GPR161 siRNA (m): sc-145717

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. GPR161 (G protein-coupled receptor 161), also known as RE2, is a 529 amino acid protein that belongs to the G protein-coupled receptor family. Localized to the cell membrane, GPR161 is a multi-pass membrane protein that functions as an orphan receptor, relaying extracellular signals to the intracellular environment. Two isoforms of GPR161 exist due to alternative splicing events.

REFERENCES

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2. Raming, K., et al. 1998. Identification of a novel G protein-coupled receptor expressed in distinct brain regions and a defined olfactory zone. *Recept. Channels* 6: 141-151.
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4. Schwalbe, H. and Wess, G. 2002. Dissecting G protein-coupled receptors: structure, function, and ligand interaction. *Chembiochem* 3: 915-919.
5. Small, K.M., et al. 2002. False positive non-synonymous polymorphisms of G protein-coupled receptor genes. *FEBS Lett.* 516: 253-256.
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7. Bates, B., et al. 2006. Characterization of Gpr101 expression and G protein coupling selectivity. *Brain Res.* 1087: 1-14.
8. Matteson, P.G., et al. 2008. The orphan G protein-coupled receptor, Gpr161, encodes the vacuolated lens locus and controls neurulation and lens development. *Proc. Natl. Acad. Sci. USA* 105: 2088-2093.

CHROMOSOMAL LOCATION

Genetic locus: Gpr161 (mouse) mapping to 1 H2.3.

PRODUCT

GPR161 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GPR161 shRNA Plasmid (m): sc-145717-SH and GPR161 shRNA (m) Lentiviral Particles: sc-145717-V as alternate gene silencing products.

For independent verification of GPR161 (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-145717A, sc-145717B and sc-145717C.

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

GPR161 siRNA (m) is recommended for the inhibition of GPR161 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 GPR161 gene expression knockdown using RT-PCR Primer: GPR161 (m)-PR: sc-145717-PR (20 μ l, 563 bp). 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.