SANTA CRUZ BIOTECHNOLOGY, INC.

GPR149 siRNA (h): sc-78409

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. GPR149 (G protein-coupled receptor 149), also known as PGR10 or IEDA, is a 731 amino acid multi-pass membrane protein that functions as an orphan receptor and belongs to the G protein-coupled receptor family. The gene encoding GPR149 maps to human chromosome 3q25.2, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

1. Ji, T.H., et al. 1998. G protein-coupled receptors. I. Diversity of receptor-ligand interactions. J. Biol. Chem. 273: 17299-17302.
2. Raming, K., et al. 1998. Identification of a novel G protein-coupled receptor expressed in distinct brain regions and a defined olfactory zone. Receptors Channels 6: 141-151.
3. Schöneberg, T., et al. 1999. Structural basis of G protein-coupled receptor function. Mol. Cell. Endocrinol. 151: 181-193.
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.
6. Schöneberg, T., et al. 2002. The structural basis of G protein-coupled receptor function and dysfunction in human diseases. Rev. Physiol. Biochem. Pharmacol. 144: 143-227.
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CHROMOSOMAL LOCATION

Genetic locus: GPR149 (human) mapping to 3q25.2.

PRODUCT

GPR149 siRNA (h) 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 GPR149 shRNA Plasmid (h): sc-78409-SH and GPR149 shRNA (h) Lentiviral Particles: sc-78409-V as alternate gene silencing products.

For independent verification of GPR149 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-78409A, sc-78409B and sc-78409C.

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

GPR149 siRNA (h) is recommended for the inhibition of GPR149 expression in human 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 GPR149 gene expression knockdown using RT-PCR Primer: GPR149 (h)-PR: sc-78409-PR (20 µl). 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.