SANTA CRUZ BIOTECHNOLOGY, INC.

GPR126 siRNA (h): sc-95410

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. GPR126 (G protein-coupled receptor 126), also known as APG1, DREG, VIGR or PS1TP2, is a 1,221 amino acid multi-pass membrane protein that contains one pentaxin domain, one GPS domain and one CUB domain. Existing as three alternatively spliced isoforms, GPR126 functions as an orphan G protein-coupled receptor that, when subject to genetic variation, may influence stature and adult height.

REFERENCES

1. Lee, D.K., et al. 2001. Discovery and mapping of ten novel G protein-coupled receptor genes. Gene 275: 83-91.
2. Stehlik, C., et al. 2004. VIGR—a novel inducible adhesion family G protein-coupled receptor in endothelial cells. FEBS Lett. 569: 149-155.
3. Bjarnadóttir, T.K., et al. 2004. The human and mouse repertoire of the adhesion family of G protein-coupled receptors. Genomics 84: 23-33.
4. Gudbjartsson, D.F., et al. 2008. Many sequence variants affecting diversity of adult human height. Nat. Genet. 40: 609-615.
5. Amisten, S., et al. 2008. Gene expression profiling for the identification of G protein-coupled receptors in human platelets. Thromb. Res. 122: 47-57.
6. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 612243. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: GPR126 (human) mapping to 6q24.1.

PRODUCT

GPR126 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 GPR126 shRNA Plasmid (h): sc-95410-SH and GPR126 shRNA (h) Lentiviral Particles: sc-95410-V as alternate gene silencing products.

For independent verification of GPR126 (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-95410A, sc-95410B and sc-95410C.

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.

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

GPR126 siRNA (h) is recommended for the inhibition of GPR126 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 GPR126 gene expression knockdown using RT-PCR Primer: GPR126 (h)-PR: sc-95410-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.