SANTA CRUZ BIOTECHNOLOGY, INC.

GPR85 siRNA (m): sc-62404

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. GPR85 (G protein-coupled receptor 85), also designated SREB2 (super conserved receptor expressed in brain 2), is a 370 amino acid multi-pass membrane protein that functions as an orphan receptor and belongs to the GPR family. Highly expressed in testis and brain, GPR85 is found at lower levels in spleen, placenta and small intestine, and is encoded by a gene that maps to human chromosome 7q31.1.

REFERENCES

1. Matsumoto, M., et al. 2000. An evolutionarily conserved G protein-coupled receptor family, SREB, expressed in the central nervous system. Biochem. Biophys. Res. Commun. 272: 576-582.
2. Hellebrand, S., et al. 2000. The brain-specific G protein-coupled receptor GPR85 with identical protein sequence in man and mouse maps to human chromosome 7q31. Biochim. Biophys. Acta 1493: 269-272.
3. Hellebrand, S., et al. 2001. Gpr85, a novel member of the G protein-coupled receptor family, prominently expressed in the developing mouse cerebral cortex. Brain Res. Gene Expr. Patterns 1: 13-16.
4. Jeon, J., et al. 2002. Cloning and localization of rgpr85 encoding rat G protein-coupled receptor. Biochem. Biophys. Res. Commun. 298: 613-618.
5. Lee, D.K., et al. 2002. Novel G protein-coupled receptor genes expressed in the brain: continued discovery of important therapeutic targets. Expert Opin. Ther. Targets 6: 185-202.
6. Lee, D.K., et al. 2003. Continued discovery of ligands for G protein-coupled receptors. Life Sci. 74: 293-297.
7. Matsumoto, M., et al. 2005. A conserved mRNA expression profile of SREB2 (GPR85) in adult human, monkey, and rat forebrain. Brain Res. Mol. Brain Res. 138: 58-69.

CHROMOSOMAL LOCATION

Genetic locus: Gpr85 (mouse) mapping to 6 A1.

PRODUCT

GPR85 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 GPR85 shRNA Plasmid (m): sc-62404-SH and GPR85 shRNA (m) Lentiviral Particles: sc-62404-V as alternate gene silencing products.

For independent verification of GPR85 (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-62404A, sc-62404B and sc-62404C.

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

GPR85 siRNA (m) is recommended for the inhibition of GPR85 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 GPR85 gene expression knockdown using RT-PCR Primer: GPR85 (m)-PR: sc-62404-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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.