SANTA CRUZ BIOTECHNOLOGY, INC.

GPR62 siRNA (h): sc-62399

BACKGROUND

GPR62 (probable G protein-coupled receptor 62, hGPCR8) is a 368 amino acid protein encoded by the human GPR62 gene. GPR62 is an orphan receptor member of the G protein-coupled receptor 1 family. G protein-coupled receptors (GPCRs or GPRs) contain seven transmembrane domains and transduce extracellular signals through heterotrimeric G proteins. Key roles for G protein-coupled receptors include control of protein maturation and cell surface delivery and providing the correct framework for interactions with both heterotrimeric G proteins and arrestins to allow signal generation and its termination. GPR62 is expressed in brain tissue, most notably the basal forebrain, frontal cortex, caudate, putamen, thalamus and hippocampus.

REFERENCES

1. Lee, D.K., et al. 2001. Identification of four novel human G protein-coupled receptors expressed in the brain. Brain Res. Mol. Brain Res. 86: 13-22.
2. Cikos, S., et al. 2001. Cloning of a novel biogenic amine receptor-like G protein-coupled receptor expressed in human brain. Biochim. Biophys. Acta 1521: 66-72.
3. Takeda, S., et al. 2002. Identification of G protein-coupled receptor genes from the human genome sequence. FEBS Lett. 520: 97-101.
4. Conner, A.C., et al. 2004. A key role for transmembrane prolines in calcitonin receptor-like receptor agonist binding and signalling: implications for family B G protein-coupled receptors. Mol. Pharmacol. 67: 20-31.
5. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
6. Milligan, G. 2007. A day in the life of a G protein-coupled receptor: the contribution to function of G protein-coupled receptor dimerization. Br. J. Pharmacol. 153: S216-S229.
7. Oldham, W.M. and Hamm, H.E. 2007. Heterotrimeric G protein activation by G protein-coupled receptors. Nat. Rev. Mol. Cell Biol. 9: 60-71.

CHROMOSOMAL LOCATION

Genetic locus: GPR62 (human) mapping to 3p21.2.

PRODUCT

GPR62 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 GPR62 shRNA Plasmid (h): sc-62399-SH and GPR62 shRNA (h) Lentiviral Particles: sc-62399-V as alternate gene silencing products.

For independent verification of GPR62 (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-62399A, sc-62399B and sc-62399C.

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

GPR62 siRNA (h) is recommended for the inhibition of GPR62 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 GPR62 gene expression knockdown using RT-PCR Primer: GPR62 (h)-PR: sc-62399-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.