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GPR89 siRNA (m): sc-145741

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. GPR89A, also known as GPHRA (Golgi pH regulator A) or putative NFκB-activating protein 90, is a 455 amino acid multi-pass membrane protein of the Golgi apparatus that exists as a homotrimer. Ubiquitously expressed, GPR89A plays a role in counter-ion conductance and is encoded by a gene that maps to human chromosome 1q21.1. GPR89A exists as three alternatively spliced isoforms.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Gpr89 (mouse) mapping to 3 F2.1.

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.

PRODUCT

GPR89 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 GPR89 shRNA Plasmid (m): sc-145741-SH and GPR89 shRNA (m) Lentiviral Particles: sc-145741-V as alternate gene silencing products.

For independent verification of GPR89 (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-145741A, sc-145741B and sc-145741C.

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

GPR89 siRNA (m) is recommended for the inhibition of GPR89 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 GPR89 gene expression knockdown using RT-PCR Primer: GPR89 (m)-PR: sc-145741-PR (20 μl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.