SANTA CRUZ BIOTECHNOLOGY, INC.

GALR3 siRNA (m): sc-40011

BACKGROUND

Galanin receptor-3 (GALR3), a 368 and 370 amino acid protein in human and rat, respectively, belongs to a family of G protein-coupled receptors that bind the neuropeptide galanin, which is distributed throughout the central and peripheral nervous system, the pituitary gland, the gastrointestinal tract and in the endocrine and exocrine pancreas. GALR3 mRNA is widely distributed, but expressed at low abundance. In human, GALR3 mRNA is highly expressed in the hypothalamus, pituitary and testis, and is expressed to a lesser extent in adrenal gland and pancreas. Rat and human GALR3 co-express with potassium channel subunits GIRK1 and GIRK4. Like GALR1, GALR3 signaling pathways lead to the inhibition of adenylate cyclase and to the activation of potassium channels, which are linked to the regulation of neurotransmitter release. Binding of galanin to galanin receptors results in increased feeding, impaired learning, enhanced opiate analgesia and decreased opiate place preference.

REFERENCES

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4. Zdrojewicz, Z. and Sowinska, E. 2000. The significance of galanin in physiologic and pathologic processes in humans. Postepy Hig. Med. Dosw. 54: 819-833.
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CHROMOSOMAL LOCATION

Genetic locus: Galr3 (mouse) mapping to 15 E1.

PRODUCT

GALR3 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 GALR3 shRNA Plasmid (m): sc-40011-SH and GALR3 shRNA (m) Lentiviral Particles: sc-40011-V as alternate gene silencing products.

For independent verification of GALR3 (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-40011A, sc-40011B and sc-40011C.

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

GALR3 siRNA (m) is recommended for the inhibition of GALR3 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 GALR3 gene expression knockdown using RT-PCR Primer: GALR3 (m)-PR: sc-40011-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.