SANTA CRUZ BIOTECHNOLOGY, INC.

Latrophilin-2 siRNA (h): sc-60919

BACKGROUND

The Latrophilin family of G protein-coupled receptors consists of three members, latrophilin-1, 2 and 3, each of which displays distinct tissue distribution and function. Latrophilin-1, the most characterized member of this family, acts as a receptor for α-Latrotoxin, a component of venom from the black widow spider. Binding of α-Latrotoxin to Latrophilin-1 triggers synaptic vesicle exocytosis via both Ca^{2+}-dependent and -independent mechanisms, resulting in vesicle depletion. Latrophilin-1 is abundant in brain and present in endocrine cells. Latrophilin-3 is also brain-specific, whereas latrophilin-2 expression is ubiquitous.

REFERENCES

1. Matsushita, H., et al. 1999. The latrophilin family: multiply spliced G protein-coupled receptors with differential tissue distribution. FEBS Lett. 443: 348-352.
2. Bittner, M.A., et al. 2000. α-Latrotoxin and its receptors CIRL (latrophilin) and neurexin 1 α mediate effects on secretion through multiple mechanisms. Biochimie 82: 447-452.
3. Van Renterghem, C., et al. 2000. α-Latrotoxin forms calcium-permeable membrane pores via interactions with latrophilin or neurexin. Eur. J. Neurosci. 12: 3953-3962.
4. Sudhof, T.C., et al. 2001. α-Latrotoxin and its receptors: neurexins and CIRL/latrophilins. Annu. Rev. Neurosci. 24933-24962.
5. Nicholson, G.M., et al. 2002. Spiders of medical importance in the Asia-Pacific: atracotoxin, latrotoxin and related spider neurotoxins. Clin. Exp. Pharmacol. Physiol. 29: 785-794.
6. Ushkaryov, Y.A., et al. 2004. The multiple actions of black widow spider toxins and their selective use in neurosecretion studies. Toxicon 43: 527-542.

CHROMOSOMAL LOCATION

Genetic locus: LPHN2 (human) mapping to 1p31.1.

PRODUCT

Latrophilin-2 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 Latrophilin-2 shRNA Plasmid (h): sc-60919-SH and Latrophilin-2 shRNA (h) Lentiviral Particles: sc-60919-V as alternate gene silencing products.

For independent verification of Latrophilin-2 (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-60919A, sc-60919B and sc-60919C.

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

Latrophilin-2 siRNA (h) is recommended for the inhibition of Latrophilin-2 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.

GENE EXPRESSION MONITORING

Latrophilin-2 (E-3): sc-514197 is recommended as a control antibody for monitoring of Latrophilin-2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Latrophilin-2 gene expression knockdown using RT-PCR Primer: Latrophilin-2 (h)-PR: sc-60919-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.