SANTA CRUZ BIOTECHNOLOGY, INC.

Relaxin Receptor 3 siRNA (h): sc-60717

BACKGROUND

Relaxin Receptor 3 (also known as Relaxin/Insulin-like family peptide receptor 3, RXFP3, RLN3R1, GPCR135 and SALPR) is a G protein-coupled receptor that binds Relaxin 3 and influences differentiation and maintenance of the nervous system. Relaxin Receptor 3 shares sequence similarity with Somatostatin receptors and Angiotensin receptors. It mediates central processing of sensory signals in the rat and is thought to be a modulator of stress responses. Relaxin Receptor 3 is present in the brain, with highest expression in substantia nigra and pituitary, followed by hippocampus, spinal cord, amygdala, caudate nucleus and corpus callosum, and low level expression in cerebellum. In peripheral tissues there are high levels in adrenal glands and low levels in pancreas, salivery gland, placenta, mammary gland and testis.

REFERENCES

1. Liu, C., et al. 2003. Identification of Relaxin 3/INSL7 as an endogenous ligand for the orphan G protein-coupled receptor GPCR135. J. Biol. Chem. 278: 50754-50764.
2. Boels, K., et al. 2004. Identification of a mouse orthologue of the G protein-coupled receptor SALPR and its expression in adult mouse brain and during development. Brain Res. Dev. Brain Res. 152: 265-268.
3. Sutton, S.W., et al. 2004. Distribution of G protein-coupled receptor GPCR135 binding sites and receptor mRNA in the rat brain suggests a role for Relaxin 3 in neuroendocrine and sensory processing. Neuroendocrinology 80: 298-307.
4. Van der Westhuizen, E.T., et al. 2005. Responses of GPCR135 to human gene 3 (H3) Relaxin in CHO-K1 cells determined by microphysiometry. Ann. N.Y. Acad. Sci. 1041: 332-337.
5. Liu, C., et al. 2005. Relaxin 3/Insulin-like peptide 5 chimeric peptide, a selective ligand for G protein-coupled receptor GPCR135 and GPCR142 over leucine-rich repeat-containing G protein-coupled receptor 7. Mol. Pharmacol. 67: 231-240.
6. Chen, J., et al. 2005. Pharmacological characterization of Relaxin 3/INSL7 receptors GPCR135 and GPCR142 from different mammalian species. J. Pharmacol. Exp. Ther. 312: 83-95.

CHROMOSOMAL LOCATION

Genetic locus: RXFP3 (human) mapping to 5p13.2.

PRODUCT

Relaxin Receptor 3 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 Relaxin Receptor 3 shRNA Plasmid (h): sc-60717-SH and Relaxin Receptor 3 shRNA (h) Lentiviral Particles: sc-60717-V as alternate gene silencing products.

For independent verification of Relaxin Receptor 3 (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-60717A, sc-60717B and sc-60717C.

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

Relaxin Receptor 3 siRNA (h) is recommended for the inhibition of Relaxin Receptor 3 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

Relaxin Receptor 3 (D-10): sc-377365 is recommended as a control antibody for monitoring of Relaxin Receptor 3 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 Relaxin Receptor 3 gene expression knockdown using RT-PCR Primer: Relaxin Receptor 3 (h)-PR: sc-60717-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.