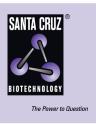
SANTA CRUZ BIOTECHNOLOGY, INC.

α_{2C} -AR siRNA (m): sc-29623



BACKGROUND

 $\alpha_{2C}\text{-}adrenergic receptors} (\alpha_{2C}\text{-}AR)$ regulate neurotransmitter release from sympathetic nerves in the heart, and from adrenergic neurons in the central nervous system. $\alpha_{2C}\text{-}AR$ can influence Parkinson's disease, panic disorders, and Huntington disease (HD) progression. A genetic variant in the $\alpha_{2C}\text{-}AR$ coding region (Del322-325) renders the receptor partially uncoupled from G_i , and is a contributing risk factor for heart failure. $\alpha_{2C}\text{-}AR$ transcripts are present in rat muscle, heart, pancreas, and kidney.

REFERENCES

- 1. Eason, M.G., et al. 1993. Human α_2 -adrenergic receptor subtype distribution: widespread and subtype-selective expression of α_{2C} 10, α_{2C} 4, and α_{2C} 2 mRNA in multiple tissues. Mol. Pharmacol. 44: 70-75.
- 2. Riess, O., et al. 1994. Precise mapping of the brain α_2 -adrenergic receptor gene within chromosome 4p16. Genomics 19: 298-302.
- 3. Hein, L., et al. 1999. Two functionally distinct α_2 -adrenergic receptors regulate sympathetic neurotransmission. Nature 402: 181-184.
- 4. Gerson, M.C., et al. 2003. Activity of the uptake-1 norepinephrine transporter as measured by I-123 MIBG in heart failure patients with a loss-of-function polymorphism of the presynaptic α_{2C} -adrenergic receptor. J. Nucl. Cardiol. 10: 583-589.
- 5. Small, K.M., et al. 2004. Polymorphisms of cardiac presynaptic α_{2C} -adrenergic receptors: diverse intragenic variability with haplotype-specific functional effects. Proc. Natl. Acad. Sci. USA 101: 13020-13025.
- 6. Olave, M.J., et al. 2004. Axon terminals possessing α_{2C} -adrenergic receptors densely innervate neurons in the rat lateral spinal nucleus which respond to noxious stimulation. Neuroscience 126: 391-403.

CHROMOSOMAL LOCATION

Genetic locus: Adra2c (mouse) mapping to 5 B2.

PRODUCT

 $\alpha_{2C}\text{-}AR$ 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see $\alpha_{2C}\text{-}AR$ shRNA Plasmid (m): sc-29623-SH and $\alpha_{2C}\text{-}AR$ shRNA (m) Lentiviral Particles: sc-29623-V as alternate gene silencing products.

For independent verification of α_{2C} -AR (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-29623A, sc-29623B and sc-29623C.

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.

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 μ l of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNAse-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

 $\alpha_{2C}\text{-}AR$ siRNA (m) is recommended for the inhibition of $\alpha_{2C}\text{-}AR$ 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 μ M in 66 μ l. 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 α_{2C} -AR gene expression knockdown using RT-PCR Primer: α_{2C} -AR (m)-PR: sc-29623-PR (20 μ l, 419 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.