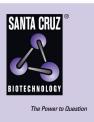
SANTA CRUZ BIOTECHNOLOGY, INC.

α_{1D}-AR siRNA (h): sc-29620



BACKGROUND

 α_{1D} -adrenergic receptors (α_{1D} -ARs) couple to $G_{q/11}$ and participate directly in sympathetic regulation of systemic blood pressure by vasoconstriction. α_{1D} -AR can form hetero-oligomers with α_{1B} receptors. α_{1D} -AR transcripts are abundant in prostate and aorta. α_{1A} adrenergic receptors (α_{1A} -ARs) mediate actions in the sympathetic nervous system through the binding of the cate-cholamines, epinephrine and norepinephrine. α_{1A} -adrenergic receptors couple to $G_{q/11}$ and regulate blood pressure due to changes in vascular tone and cardiac output. Alternative splicing of this gene generates four isoforms with distinct C-termini, and the different expression profile of these subtypes produces distinct patterns of activation. α_{1A} -AR transcripts are abundant in heart, brain, liver and prostate. α_{1A} -AR transcript sizes of 6.0, 4.0, 3.0 and 3.0 kb transcripts have been detected in heart, and 6.0 kb and 4.0 kb transcripts have been detected in prostate.

REFERENCES

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- 2. Cotecchia, S., et al. 1990. Multiple second messenger pathways of α -adrenergic receptor subtypes expressed in eukaryotic cells. J. Biol. Chem. 265: 63-69.
- 3. Bertin, B., et al. 1992. Functional expression of the human serotonin 5-HT1A receptor in *Escherichia coli*. Ligand binding properties and interaction with recombinant G protein α -subunits. J. Biol. Chem. 267: 8200-8206.
- Levy, F.O., et al. 1992. Molecular cloning of a human gene (S31) encoding a novel serotonin receptor mediating inhibition of adenylyl cyclase. FEBS Lett. 296: 201-206.
- 5. Weinberg, D.H., et al. 1994. Cloning, expression and characterization of human α adrenergic receptors α_{1a} , α_{1b} and α_{1c} . Biochem. Biophys. Res. Commun. 201: 1296-1304.

CHROMOSOMAL LOCATION

Genetic locus: ADRA1D (human) mapping to 20p13.

PRODUCT

 $\alpha_{1D}\text{-}AR$ 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 $\alpha_{1D}\text{-}AR$ shRNA Plasmid (h): sc-29620-SH and $\alpha_{1D}\text{-}AR$ shRNA (h) Lentiviral Particles: sc-29620-V as alternate gene silencing products.

For independent verification of α_{1D} -AR (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-29620A, sc-29620B and sc-29620C.

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

 $\alpha_{1D}\text{-}AR$ siRNA (h) is recommended for the inhibition of $\alpha_{1D}\text{-}AR$ 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 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.

GENE EXPRESSION MONITORING

 α_{1D} -AR (F-10): sc-390884 is recommended as a control antibody for monitoring of α_{1D} -AR 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 α_{1D} -AR gene expression knockdown using RT-PCR Primer: α_{1D} -AR (h)-PR: sc-29620-PR (20 µl, 491 bp). 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.