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- Trockeneiszuschlag
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SANTA CRUZ BIOTECHNOLOGY, INC.

ETAR siRNA (r): sc-270097

BACKGROUND

Endothelin receptor A (ETAR), also known as EDNRA, ET1 receptor, ETA, EDN1 and ET-AR is a member of the guanine-binding regulatory protein-coupled receptor family. ETAR binds endothelins and has the highest affinity for its ligand ET1, as compared to the ETBR receptor. Both ET receptors, ETAR and ETBR, are activated by ET1, which results in inhibition of active lens sodium-potassium transport. Activation of the ET receptors also causes an increase in cytoplasmic calcium concentration in cultured lens epithelial cells. In addition, ETAR induces arachidonic acid accumulation. ETAR has seven hydrophobic transmembrane domains and is expressed in aorta, lung, atrium, kidney, placenta and prostate. Specifically, placental vascular smooth muscle cells (PVSMCs) exclusively express ETAR.

REFERENCES

1. Adachi, M., et al. 1991. Cloning and characterization of cDNA encoding human A-type endothelin receptor. Biochem. Biophys. Res. Commun. 180: 1265-1272.
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3. Kobayashi, S., et al. 1994. Binding and functional properties of endothelin receptor subtypes in the human prostate. Mol. Pharmacol. 45: 306-311.
4. Miyamoto, Y., et al. 1996. Alternative RNA splicing of the human endothelin-A receptor generates multiple transcripts. Biochem. J. 313: 795-801.
5. Okafor, M., et al. 2001. The inhibatory influence of endothelin on active sodium-potassium transport in porcine lens. Invest. Ophthalmol. Vis. Sci. 42: 1018-1023.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 131243. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. LocusLink Report (LocusID: 1909). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Ednra (rat) mapping to 19q11.

PRODUCT

ETAR siRNA (r) 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 ETAR shRNA Plasmid (r): sc-270097-SH and ETAR shRNA (r) Lentiviral Particles: sc-270097-V as alternate gene silencing products.

For independent verification of ETAR (r) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-270097A, sc-270097B and sc-270097C.

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

ETAR siRNA (r) is recommended for the inhibition of ETAR expression in rat 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

ETAR (D-2): sc-518060 is recommended as a control antibody for monitoring of ETAR 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 ETAR gene expression knockdown using RT-PCR Primer: ETAR (r)-PR: sc-270097-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.