

# AT<sub>1</sub>a siRNA (m): sc-141313

## BACKGROUND

Angiotensin II (Ang II) is an important physiological effector of blood pressure and volume regulation through vasoconstriction, aldosterone release, sodium uptake and thirst stimulation. Although Ang II interacts with two types of cell surface receptors, AT<sub>1</sub> and AT<sub>2</sub>, most of the major cardiovascular effects seem to be mediated through AT<sub>1</sub>. AT<sub>1</sub>a, (Angiotensin II receptor, type 1a), also known as AT<sub>1</sub>, AG2S, AT2R1, Agtr1, AT2R1A or Agtr1a, is a 359 amino acid multi-pass membrane protein that is the mouse homolog of human AT<sub>1</sub>. Belonging to the G protein-coupled receptor 1 family, AT<sub>1</sub>a is a receptor for Angiotensin II and mediates its action by associating with G proteins that activate a phosphatidylinositol-calcium second messenger system. AT<sub>1</sub>a is encoded by a gene mapping to mouse chromosome 13 A3.2.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Agtr1a (mouse) mapping to 13 A3.2.

## PRODUCT

AT<sub>1</sub>a 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 μM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AT<sub>1</sub>a shRNA Plasmid (m): sc-141313-SH and AT<sub>1</sub>a shRNA (m) Lentiviral Particles: sc-141313-V as alternate gene silencing products.

For independent verification of AT<sub>1</sub>a (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-141313A, sc-141313B and sc-141313C.

## 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

AT<sub>1</sub>a siRNA (m) is recommended for the inhibition of AT<sub>1</sub>a 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 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor AT<sub>1</sub>a gene expression knockdown using RT-PCR Primer: AT<sub>1</sub>a (m)-PR: sc-141313-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](http://www.scbt.com) for detailed protocols and support products.