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## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


**SZABO-SCANDIC HandelsgmbH**

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

# AVP shRNA (h) Lentiviral Particles: sc-45291-V

## BACKGROUND

Arginine-vasopressin (AVP) is an antidiuretic, neurohypophyseal hormone involved with body fluid homeostasis and is believed to act as an autocrine growth factor in certain cancers, such as breast cancer. The many forms of the AVP precursor have been found in Skbr3 and Mcf7 cells, both at the cell surface and in secreted form. Excessive AVP secretion, regulated by specific and highly sensitive hypothalamic osmoreceptors, increases mean arterial pressure, systemic vascular resistance and stroke volume index via vasopressin V1a- and V2-mediated effects on the peripheral vasculature and on water retention. Myocardial function may be directly and adversely affected by AVP through V1a activation on myocardial contractility and cell growth. A V1-type receptor-mediated pathway caused by AVP has also proven to promote cancer growth through ERK1/2 activation. The antidiuretic action of AVP is regulated by the vasopressin V2 receptor. AVP may also keep migraines in remission, as it promotes antinociception and influences vasomotor and behavior control. These factors make AVP a target for therapy in both acute and chronic heart failure.

## REFERENCES


1. Goldsmith, S.R. and Gheorghiade, M. 2005. Vasopressin antagonism in heart failure. J. Am. Coll. Cardiol. 46: 1785-1791.
2. Gupta, V.K. 2005. Recurrent syncope, hypotension, asthma, and migraine with aura: role of metoclopramide. Headache 45: 1413-1415.
3. Slusarz, M.J., et al. 2005. Investigation of mechanism of desmopressin binding in vasopressin V2 receptor versus vasopressin V1a and oxytocin receptors: molecular dynamics simulation of the agonist-bound state in the membrane-aqueous system. Biopolymers 81: 321-338.


## CHROMOSOMAL LOCATION

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

## PRODUCT

AVP shRNA (h) Lentiviral Particles are concentrated, transduction-ready viral particles containing a target-specific construct that encodes a 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0 x $10^6$ infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see AVP siRNA (h): sc-45291 and AVP shRNA Plasmid (h): sc-45291-SH as alternate gene silencing products.

## RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

## APPLICATIONS

AVP shRNA (h) Lentiviral Particles is recommended for the inhibition of AVP expression in human cells.

## SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0 x $10^6$ infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

## GENE EXPRESSION MONITORING

AVP (VAS 10-2-2): sc-73504 is recommended as a control antibody for monitoring of AVP 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 (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor AVP gene expression knockdown using RT-PCR Primer: AVP (h)-PR: sc-45291-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

## STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.