SANTA CRUZ BIOTECHNOLOGY, INC.

ARG-Vasopressin (VAS 10-2-2): sc-73504

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ARG-Vasopressin, a processed active peptide cleaved from its precursor, 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 ARG-Vasopressin precursor have been found in SKBR3 and MCF7 cells, both at the cell surface and in secreted form. Excessive ARG-Vasopressin 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 ARG-Vasopressin through V1a activation on myocardial contractility and cell growth. A V1-type receptor-mediated pathway caused by ARG-Vasopressin has also proven to promote cancer growth through ERK1/2 activation. The antidiuretic action of ARG-Vasopressin is regulated by the Vasopressin V2 receptor. ARG-Vasopressin may also keep migraines in remission, as it promotes antinociception and influences vasomotor and behavior control. These factors make ARG-Vasopressin 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. Keegan, B.P., Akerman, B.L., Péqueux, C. and North, W.G. 2005. Provasopressin expression by breast cancer cells: implications for growth and novel treatment strategies. Breast Cancer Res. Treat. 95: 265-277.
4. Luckner, G., Dünser, M.W., Jochberger, S., Mayr, V.D., Wenzel, V., Ulmer, H., Schmid, S., Knotzer, H., Pajk, W., Hasibeder, W., Mayr, A.J. and Friesenecker, B. 2005. Arginine vasopressin in 316 patients with advanced vasodilatory shock. Crit. Care Med. 33: 2659-2666.
5. Slusarz, M.J., Slusarz, R. and Ciarkowski, J. 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.
6. Sharif Naeini, R., Witty, M.F., Séguéla, P. and Bourque, C.W. 2006. An N-terminal variant of Trpv1 channel is required for osmosensory transduction. Nat. Neurosci. 9: 93-98.

CHROMOSOMAL LOCATION

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

SOURCE

ARG-Vasopressin (VAS 10-2-2) is a mouse monoclonal antibody raised against synthetic ARG-Vasopressin of human origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml of TBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ARG-Vasopressin (VAS 10-2-2) is recommended for detection of ARG-Vasopressin of human origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ARG-Vasopressin siRNA (h): sc-45291, ARG-Vasopressin shRNA Plasmid (h): sc-45291-SH and ARG-Vasopressin shRNA (h) Lentiviral Particles: sc-45291-V.

Molecular Weight (predicted) of ARG-Vasopressin: 17 kDa.

Molecular Weight (observed) of ARG-Vasopressin: 33 kDa.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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