

AVP (E-8): sc-390723

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.

CHROMOSOMAL LOCATION

Genetic locus: Avp (mouse) mapping to 2 F1.

SOURCE

AVP (E-8) is a mouse monoclonal antibody raised against amino acids 111-160 mapping near the C-terminus of AVP of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AVP (E-8) is available conjugated to agarose (sc-390723 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390723 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390723 PE), fluorescein (sc-390723 FITC), Alexa Fluor® 488 (sc-390723 AF488), Alexa Fluor® 546 (sc-390723 AF546), Alexa Fluor® 594 (sc-390723 AF594) or Alexa Fluor® 647 (sc-390723 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390723 AF680) or Alexa Fluor® 790 (sc-390723 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

AVP (E-8) is recommended for detection of AVP precursor, Neurophysin II and copeptin mature chains of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AVP siRNA (m): sc-155867, AVP shRNA Plasmid (m): sc-155867-SH and AVP shRNA (m) Lentiviral Particles: sc-155867-V.

Molecular Weight (predicted) of AVP: 17 kDa.

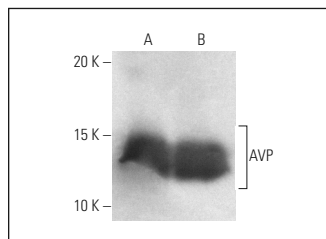
Molecular Weight (observed) of AVP: 33 kDa.

Positive Controls: mouse pituitary gland extract: sc-364246.

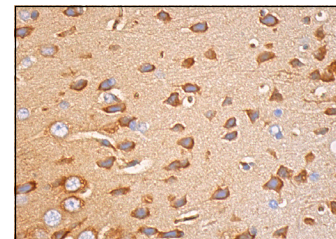
STORAGE

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

DATA



AVP (E-8): sc-390723. Western blot analysis of AVP expression in mouse pituitary gland (A) and rat pituitary gland (B) tissue extracts. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.



AVP (E-8): sc-390723. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse brain tissue showing cytoplasmic staining of neuronal cells, glial cells and endothelial cells.

SELECT PRODUCT CITATIONS

- Bernstein, H.G., et al. 2017. Insulin-regulated aminopeptidase immunoreactivity is abundantly present in human hypothalamus and posterior pituitary gland, with reduced expression in paraventricular and suprachiasmatic neurons in chronic schizophrenia. *Eur. Arch. Psychiatry Clin. Neurosci.* 267: 427-443.
- Takemura, S., et al. 2020. Circadian rhythms of sorting nexin 25 in the mouse suprachiasmatic nucleus. *Neurosci. Lett.* 727: 134897.
- Lu, R., et al. 2020. Necdin regulates BMAL1 stability and circadian clock through SGT1-HSP90 chaperone machinery. *Nucleic Acids Res.* 48: 7944-7957.
- Kim, D.H., et al. 2021. Transcription factor TonEBP stimulates hyperosmolality-dependent arginine vasopressin gene expression in the mouse hypothalamus. *Front. Endocrinol.* 12: 627343.
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- Taub, A., et al. 2021. Arginine vasopressin-containing neurons of the suprachiasmatic nucleus project to CSF. *eNeuro* 8: ENEURO.0363-20.2021.
- Jiang, Y.H., et al. 2023. Contribution of inwardly rectifying K⁺ channel 4.1 of supraoptic astrocytes to the regulation of vasopressin neuronal activity by hypotonicity. *Glia* 71: 704-719.
- Liu, Y., et al. 2023. Interactions between the astrocytic volume-regulated anion channel and aquaporin 4 in hyposmotic regulation of vasopressin neuronal activity in the supraoptic nucleus. *Cells* 12: 1723.

RESEARCH USE

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

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