Argipressin acetate

Cat. No.:	HY-W539944
CAS No.:	129979-57-3
Molecular Formula:	$C_{48}H_{69}N_{15}O_{14}S_2$
Molecular Weight:	1144.28
Sequence Shortening:	CYFQNCPRG-NH2 (Disulfide bridge: Cys1-Cys6)
Target:	Vasopressin Receptor; Apoptosis
Pathway:	GPCR/G Protein; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

Argipressin (Arg8-vasopressin) (acetate) binds to the V1, V2, V3-vascular arginine vasopressin receptor, with a K_d value of 1.31 nM in A7r5 rat aortic smooth muscle cells for V1[1][2][3][4].

In Vitro

Argipressin (Arg8-vasopressin) (acetate) induces proliferation and prevented cytokine-induced apoptosis in rodent and human beta-cells[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	clonal BRIN BD11 and 1.1B4 cells
Concentration:	10^{-6} M
Incubation Time:	2 h
Result:	Increased proliferation of rodent and human beta-cells.

Apoptosis Analysis[1]

Cell Line:	clonal BRIN BD11 and 1.1B4 cells
Concentration:	10^{-6} M
Incubation Time:	2 h
Result:	Protected against cytokine-induced beta-cell apoptosis.

In Vivo

Argipressin (Arg8-vasopressin) (acetate) (25 nmol/kg bw; intraperitoneal injection; once) significantly reduces overall AUC glucose values but not increases insulin levels in mice[1].

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Animal Model:	NIH Swiss mice (adult; male; 12-14weeks)[1]
Dosage:	25 nmol/kg bw

Administration:	AVP (25 nmol/kg bw; intraperitoneal injection; once)
Result:	Reduced (P<0.001) overall AUC glucose values and but not increased insulin levels in mice.

CUSTOMER VALIDATION

- Chemosphere. 2021 Apr;269:128776.
- Biochem Pharmacol. 2022 Sep 29;115265.
- J Cell Mol Med. 2022 Oct 14.
- Front Pharmacol. 2019 Nov 15;10:1380.
- Front Neurosci. 2022 Mar 25;16:838942.

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REFERENCES

[1]. Shruti Mohan, et al. Vasopressin receptors in islets enhance glucose tolerance, pancreatic beta-cell secretory function, proliferation and survival. Biochimie.

[2]. Thibonnier M, et al. Multiple signaling pathways of V1-vascular vasopressin receptors of A7r5 cells. Endocrinology. 1991 Dec;129(6):2845-56.

[3]. Moriya T, et al. Vasopressin-induced intracellular Ca^{2} concentration responses in non-neuronal cells of the rat dorsal root ganglion. Brain Res. 2012 Nov 5;1483:1-12.

[4]. Keun Suk Park, et al. Role of vasopressin in current anesthetic practice. Korean J Anesthesiol. 2017 Jun; 70(3): 245–257.

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