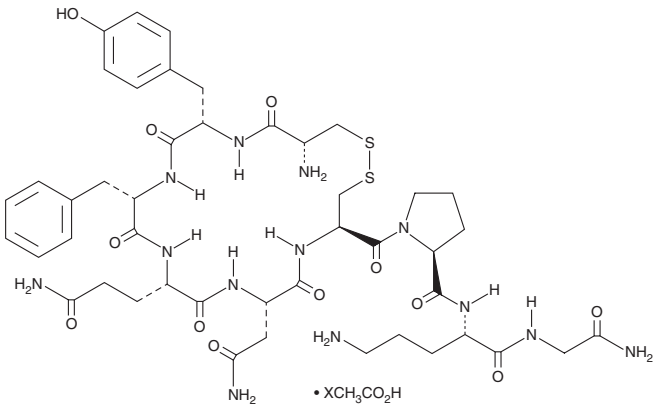
PRODUCT INFORMATION

Ornipressin (acetate)

Item No. 36716



CAS Registry No.:	914453-98-8
Formal Name:	8-L-ornithine-vasopressin, acetate
Synonyms:	Cys-Tyr-Phe-Gln-Asn-Cys-Pro-Orn-Gly-NH_2, 8-Ornithine Vasopressin, Orn^8-Vasopressin, POR-8
Peptide Sequence:	CYFQNCPXG-NH_2 where X = ornithine
MF:	$C_{45}H_{63}N_{13}O_{12}S_2 \bullet XC_2H_4O_2$
FW:	1,042.2
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ornipressin (acetate) is supplied as a crystalline solid. A stock solution may be made by dissolving the ornipressin (acetate) in the solvent of choice, which should be purged with an inert gas. Ornipressin (acetate) is soluble in the organic solvent DMSO at a concentration of approximately 10 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ornipressin (acetate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ornipressin (acetate) in PBS (pH 7.2) is approximately 20 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ornipressin is an agonist of the vasopressin V_{1A} receptor and a synthetic peptide derivative of argipressin (Item No. 24154) containing an arginine-to-ornithine substitution at position eight.[1] It selectively induces reporter gene expression in HEK293 cells expressing vasopressin V_{1A} and V_2 receptors (EC_{50}s = 0.69 and 0.45 nM, respectively, for the human receptors) over cells expressing vasopressin V_{1B} receptors.[2] It is selective for vasopressin V_{1A} and V_2 receptors over the vasopressin V_{1B} receptor and oxytocin receptor (EC_{50}s = 7.5 and 71 nM, respectively, for the human receptors). Ornipressin increases arterial blood pressure in rats when administered at a dose of 0.1 nmol/kg.

References

1. Kam, P.C.A. and Tay, T.M. The pharmacology of ornipressin (POR-8): A local vasoconstrictor used in surgery. *Eur. J. Anaesthesiol.* **15(2)**, 133-139 (1998).
2. Wisniewski, K., Galyean, R., Tariga, H., *et al.* New, potent, selective, and short-acting peptidic V_{1a} receptor agonists. *J. Med. Chem.* **54(13)**, 4388-4398 (2011).

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