

PRODUCT INFORMATION



Urodilatin

Item No. 17400

CAS Registry No.: 115966-23-9

Synonym: ANP 95-126

MF: $C_{145}H_{234}N_{52}O_{44}S_3$

FW: 3,506.0

Purity: $\geq 95\%$

Supplied as: A crystalline solid

Storage: $-20^{\circ}C$

Stability: ≥ 4 years

H-Thr - Ala - Pro - Arg - Ser - Leu - Arg - Arg -

Ser - Ser - Cys - Phe - Gly - Gly - Arg - Met -

Asp - Arg - Ile - Gly - Ala - Gln - Ser - Gly - Leu -

Gly - Cys - Asn - Ser - Phe - Arg - Tyr - OH

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

Laboratory Procedures

Urodilatin is supplied as a crystalline solid. A stock solution may be made by dissolving the urodilatin in the solvent of choice, which should be purged with an inert gas. Urodilatin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of urodilatin in these solvents is approximately 0.3, 10, and 25 mg/ml, respectively.

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 urodilatin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of urodilatin in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Urodilatin is a renal natriuretic peptide first isolated from human urine.^{1,2} It is derived from the same precursor as atrial natriuretic peptide in kidney tubular cells and secreted lumenally.² Urodilatin regulates sodium and water reabsorption in the kidney.^{2,3} While it is not normally found in the circulation, systemic administration of urodilatin has pharmacological effects on renal, cardiovascular, and pulmonary parameters in animals.^{2,4}

References

1. Gagelmann, M., Hock, D., and Forssman, W.G. Urodilatin (CDD/ANP-95-126) is not biologically inactivated by a peptidase from dog kidney cortex membranes in contrast to atrial natriuretic peptide/cardioidilatin (α -hANP/CDD-99-126). *FEBS Lett.* **233(2)**, 249-254 (1988).
2. Forssman, W.G., Meyer, M., and Forssmann, K. The renal urodilatin system: clinical implications. *Cardiovasc. Res.* **51(3)**, 450-462 (2001).
3. Goetz, K., Drummer, C., Zhu, J.L., et al. Evidence that urodilatin, rather than ANP, regulates renal sodium excretion. *J. Am. Soc. Nephrol.* **1(6)**, 867-874 (1990).
4. Hamlyn, J.M. Natriuretic hormones, endogenous ouabain, and related sodium transport inhibitors. *Front. Endocrinol. (Lausanne)* **5**, (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM