

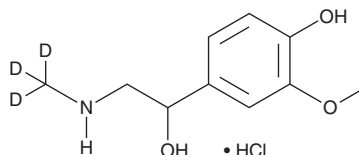
PRODUCT INFORMATION



Metanephrine-d₃ (hydrochloride)

Item No. 35207

CAS Registry No.: 1215507-88-2
Formal Name: 4-hydroxy-3-methoxy-α-[(methyl-d₃-amino)methyl]-benzenemethanol, monohydrochloride
Synonym: DL-Metanephrine-d₃
MF: C₁₀H₁₂D₃NO₃ • HCl
FW: 236.7
Chemical Purity: ≥98% (Metanephrine)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀
Supplied as: A 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

Metanephrine-d₃ (hydrochloride) is intended for use as an internal standard for the quantification of metanephrine (Item No. 15408) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Metanephrine-d₃ (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the Metanephrine-d₃ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Metanephrine-d₃ (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of Metanephrine-d₃ (hydrochloride) in these solvents is approximately 20 mg/ml.

Description

Metanephrine is an inactive metabolite of epinephrine (Item No. 21245).¹ It is formed from epinephrine by catechol-O-methyl transferase (COMT).² Urinary and plasma levels of metanephrine are increased in patients with pheochromocytoma, an adrenal medullary neuroendocrine tumor.^{3,4}

References

1. Bilezikian, J.P., Dornfeld, A.M., and Gammon, D.E. Structure-binding-activity analysis of beta-adrenergic amines—I. Binding to the beta receptor and activation of adenylate cyclase. *Biochem. Pharmacol.* **27(10)**, 1445-1454 (1978).
2. Kopin, I.J., Axelrod, J., and Gordon, E. The metabolic fate of H³-epinephrine and C¹⁴-metanephrine in the rat. *J. Biol. Chem.* **236(7)**, 2109-2136 (1961).
3. Wolthers, B.G., Kema, I.P., Volmer, M., et al. Evaluation of urinary metanephrine and normetanephrine enzyme immunoassay (ELISA) kits by comparison with isotope dilution mass spectrometry. *Clin. Chem.* **43(1)**, 114-120 (1997).
4. Goldstein, D.S., Eisenhofer, G., and Kopin, I.J. Sources and significance of plasma levels of catechols and their metabolites in humans. *J. Pharm. Exp. Ther.* **305(3)**, 800-811 (2003).

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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