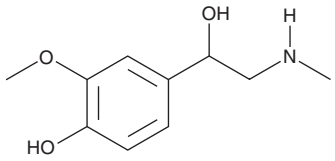
PRODUCT INFORMATION

Metanephrine

Item No. 15408

CAS Registry No.: 5001-33-2
Formal Name: 4-hydroxy-3-methoxy-α-[(methylamino) methyl]-benzenemethanol
Synonym: DL-Metanephrine
MF: $C_{10}H_{15}NO_3$
FW: 197.2
Purity: ≥95%
UV/Vis.: λ_{max}: 229, 279 nm
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

Metanephrine is supplied as a crystalline solid. A stock solution may be made by dissolving the metanephrine in the solvent of choice, which should be purged with an inert gas. Metanephrine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of metanephrine in these solvents is approximately 20 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 metanephrine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of metanephrine in PBS (pH 7.2) is approximately 15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

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 H^3-epinephrine and C^{14}-metanephrine in the rat. *J. Biol. Chem.* **236**, 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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