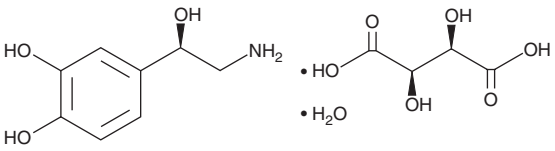
PRODUCT INFORMATION

(–)-Norepinephrine (bitartrate hydrate)

Item No. 16673

CAS Registry No.: 108341-18-0
Formal Name: 4-[(1R)-2-amino-1-hydroxyethyl]-1,2-benzenediol (2R,3R)-2,3-dihydroxybutanedioate, monohydrate
Synonyms: Arterenol, Levarterenol, NE, L-Noradrenaline
MF: $C_8H_{11}NO_3 \bullet C_4H_6O_6 \bullet H_2O$
FW: 337.3
Purity: ≥95%
UV/Vis.: λ_{max}: 224, 283 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

(–)-Norepinephrine (bitartrate hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the (–)-norepinephrine (bitartrate hydrate) in the solvent of choice, which should be purged with an inert gas. (–)-Norepinephrine (bitartrate hydrate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of (–)-norepinephrine (bitartrate hydrate) in these solvents is approximately 25 and 10 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 (–)-norepinephrine (bitartrate hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (–)-norepinephrine (bitartrate hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(–)-Norepinephrine is the endogenous isomer of (±)-norepinephrine (Item No. 35580) that acts as a neurotransmitter and hormone and is biosynthesized from dopamine by dopamine β-hydroxylase.[1-3] It is an agonist of adrenergic receptors (K_i values are 330, 56, and 740 nM for α_1, α_2, and β_1 adrenoceptors, respectively).[3] Through these receptors, (–)-norepinephrine regulates diverse processes, including those in neurological, immunological, and vascular systems.[3-6] Formulations containing (–)-norepinephrine have been used for the restoration of blood pressure in acute hypotensive states.

References

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3. Ramos, B.P. and Arnsten, A.F.T. *Pharmacol. Ther.* **113(3)**, 523-536 (2007).
4. Lorton, D. and Bellinger, D.L. *Int. J. Mol. Sci.* **16(3)**, 5635-5665 (2015).
5. Nance, D.M. and Sanders, V.M. *Brain Behav. Immun.* **21(6)**, 736-745 (2007).
6. Raiteri, M. *Pharmacol. Rev.* **58(2)**, 162-193 (2006).

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