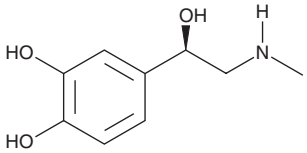
PRODUCT INFORMATION

(-)-Epinephrine

Item No. 18626

CAS Registry No.: 51-43-4
Formal Name: 4-[(1R)-1-hydroxy-2-(methylamino) ethyl]-1,2-benzenediol
Synonyms: Adrenaline, NSC 62786
MF: $C_9H_{13}NO_3$
FW: 183.2
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 281 nm



Laboratory Procedures

For long term storage, we suggest that (-)-epinephrine be stored as supplied at -20°C. It should be stable for at least two years.

(-)-Epinephrine is supplied as a crystalline solid. (-)-Epinephrine is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of (-)-epinephrine be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of berberine in water, is <0.1mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(-)-Epinephrine is a natural neurotransmitter that is released from the adrenal medulla and activates adrenoceptors (K_is = are 15, 735, and 3,970 nM for α_{1A}-, β_2-, and β_1-adrenergic receptors, respectively).[1-3] Through these receptors, (-)-epinephrine may induce either contraction or relaxation of vascular smooth muscle, depending on adrenoceptor subtype expression.[3] Receptor-mediated actions of (-)-epinephrine are also relevant to blocking anaphylaxis, reversing cardiac arrest, and reducing bleeding in clinical trials.[4-6]

References

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3. Ahles, A. and Englehardt, S. *Pharmacol. Rev.* **66(3)**, 598-637 (2014).
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