
Product Data Sheet

Product Name: Epinephrine Bitartrate

Cat. No.: GC13393

Chemical Properties

Cas. No. 51-42-3

Chemical Name (2R,3R)-2,3-dihydroxybutanedioic acid;4-[(1R)-1-hydroxy-2-(methylamino)ethyl]benzene-1,2-diol

SMILES CNCC(C1=CC(=C(C=C1)O)O)O.C(C(C(=O)O)O)(C(=O)O)O

Formula C₉H₁₃NO₃.C₄H₆O₆ M.Wt 333.29

Solubility ≥ 16.7mg/mL in DMSO Storage Store at 2-8°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

L-Epinephrine bitartrate is an α -adrenergic and β -adrenergic receptor agonist. L-Epinephrine is a hormone secreted by the medulla of the adrenal glands.

A 25 microliter volume of a 1-% L-epinephrine borate solution applied on the cornea of one eye in 12 monkeys reduces blood flow through the iris and the ciliary body by 59% and 20%, respectively, compared to the untreated control eyes[1]. Epinephrine is a direct-acting sympathomimetic α -adrenergic and β -adrenergic agonist with cyclic adenosine monophosphate-mediated, complex, bidirectional pharmacologic effects on many target organs[2]. In young adult rats, endogenous release of epinephrine facilitates stable memory formation for temporally associated events. Epinephrine enhances memory in young adult rats, in part, by increasing blood glucose levels needed to modulate memory[3]. Epinephrine is the primary drug administered during cardiopulmonary resuscitation (CPR) to reverse cardiac arrest. Epinephrine increases arterial blood pressure and coronary perfusion during CPR via alpha-1-adrenoceptor

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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agonist effects[4].

References:

- [1]. Alm A, et al. The effect of topical l-epinephrine on regional ocular blood flow in monkeys. Invest Ophthalmol Vis Sci. 1980 May;19(5):487-91.
- [2]. Simons FE, et al. First-aid treatment of anaphylaxis to food: focus on epinephrine. J Allergy Clin Immunol. 2004 May;113(5):837-44.
- [3]. Morris KA, et al. Epinephrine and glucose modulate training-related CREB phosphorylation in old rats: relationships to age-related memory impairments. Exp Gerontol. 2013 Feb;48(2):115-27.
- [4]. Callaway CW, et al. Epinephrine for cardiac arrest. Curr Opin Cardiol. 2013 Jan;28(1):36-42.

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