TOCRIS b i o s c i e n c e

Certificate of Analysis

Print Date: May 16th 2014

www.tocris.com

Product Name: Noradrenaline bitartrate

Catalog No.: 5169 Batch No.: 1

CAS Number: 108341-18-0 IUPAC Name: 4-[(1*R*)-2-Amino-1-hydroxyethyl]-1,2-benzenediol (L-(+))-bitartrate salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: Batch Molecular Weight: Physical Appearance: Solubility:

Storage: Batch Molecular Structure:

C ₈ H ₁₁ NO ₃ .C ₄ H ₆ O ₆ .H ₂ O
337.28
White solid
water to 100 mM
DMSO to 100 mM
Store at +4°C

OH NH₂ HO .C₄H₆O₆ HO

2. ANALYTICAL DATA HPLC: ¹H NMR: Mass Spectrum: Optical Rotation: Microanalysis:

Shows 99.8% purity Consistent with structure Consistent with structure $[\alpha]_D = -8.4$ (Concentration = 5, Solvent = Water) Carbon Hydrogen Nitrogen

	Carbon	nyurogen	Milloge
Theoretical	42.73	5.68	4.15
Found	42.86	5.71	4.1

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

 Corris Bioscience is an R&D Systems company

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Product Information

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CAS Number:108341-18-0IUPAC Name:4-[(1R)-2-Amino-1-hydroxyethyl]-1,2-benzenediol (L-(+))-bitartrate salt

Description:

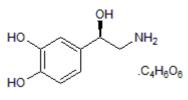
Endogenous adrenergic hormone and neurotransmitter. A classical stress hormone; underlies the fight or flight response, along with adrenaline. Increases heart rate. Vasoconstrictor.

Physical and Chemical Properties:

Batch Molecular Formula: $C_8H_{11}NO_3.C_4H_6O_6.H_2O$ Batch Molecular Weight: 337.28 Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at +4°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 100 mM DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a $45-60^{\circ}$ C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Bunney et al (1965) Norepinephrine in depressive reactions. A review. Arch.Gen.Psychiatry. 13 483. PMID: 5320621.

Gary et al (1985) Stress and brain noradrenaline: A review. Neuroscience & Biobehavioral Reviews 9 233.

Lewitt *et al* (2012) Norepinephrine: the next therapeutics frontier for Parkinson's disease. Transl.Neurodegener. **1** 4. PMID: 23211006.

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