

Certificate of Analysis

Product Name: Dopamine hydrochloride

Catalog No.: 3548

Batch No.: 1

CAS Number: 62-31-7

EC Number: 200-527-8

IUPAC Name: 3,4-Dihydroxyphenethylamine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₈H₁₁NO₂.HCl

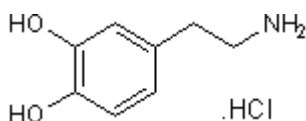
Batch Molecular Weight: 189.64

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.2% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	50.67	6.38	7.39
Found	50.42	6.25	7.41

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

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IUPAC Name: 3,4-Dihydroxyphenethylamine hydrochloride

Description:

Endogenous neurotransmitter that acts as an agonist at dopamine D₁₋₅ receptors. Synthesized in the substantia nigra and ventral tegmental area, and is a precursor in noradrenalin and adrenalin biosynthesis. Caged dopamine is also available (Cat. No 3992).

Physical and Chemical Properties:

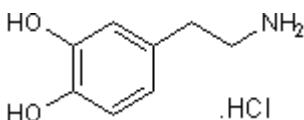
Batch Molecular Formula: C₈H₁₁NO₂.HCl

Batch Molecular Weight: 189.64

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 100 mM

DMSO to 100 mM

This product is susceptible to oxidation and may decompose in solution. It is recommended that solutions are freshly prepared and used promptly.

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°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:

Rivonello et al (2007) Novel insights into dopamine receptor pharmacology. *Eur.J.Endocrinol.* **156** S13. PMID: 17413183.

Cools (2008) Role of dopamine in the motivational and cognitive control of behavior. *Neuroscientist* **14** 381. PMID: 18660464.

Fitzgerald and Dinan (2008) Prolactin and dopamine: what is the connection? A review article. *J.Psychopharmacol.* **22** S12.

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