

## Certificate of Analysis

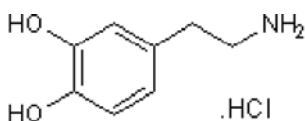
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**Product Name:** Dopamine hydrochloride  
**CAS Number:** 62-31-7  
**IUPAC Name:** 3,4-Dihydroxyphenethylamine hydrochloride

**Catalog No.:** 3548  
**Batch No.:** 1  
**EC Number:** 200-527-8

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>8</sub>H<sub>11</sub>NO<sub>2</sub>.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  
**<sup>1</sup>H 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

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IUPAC Name: 3,4-Dihydroxyphenethylamine hydrochloride

**Description:**

Dopamine hydrochloride is an endogenous neurotransmitter that acts as an agonist at dopamine D<sub>1-5</sub> receptors. Synthesized in the substantia nigra and ventral tegmental area, and is a precursor in noradrenalin and adrenalin biosynthesis.

**Physical and Chemical Properties:**

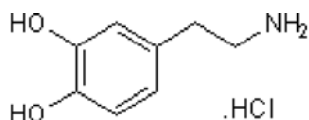
Batch Molecular Formula: C<sub>8</sub>H<sub>11</sub>NO<sub>2</sub>.HCl

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:**

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

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

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

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