

**Product Name:** NPEC-caged-dopamine

**Catalog No.:** 3992

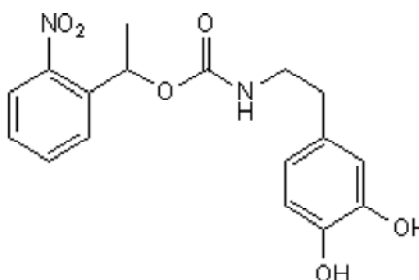
**Batch No.:** 2

CAS Number: 1257326-23-0

IUPAC Name: (N)-1-(2-Nitrophenyl)ethylcarboxy-3,4-dihydroxyphenethylamine

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>17</sub>H<sub>18</sub>N<sub>2</sub>O<sub>6</sub>  
**Batch Molecular Weight:** 346.33  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 100 mM  
 ethanol to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:** R<sub>f</sub> = 0.3 (Dichloromethane:Methanol [9:1])  
**HPLC:** Shows >99.3% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	58.96	5.24	8.09
Found	59.03	5.24	8.39

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

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**Description:**

NPEC ((N)-1-(2-nitrophenyl)ethyl) caged version of dopamine (Cat. No 3548); releases dopamine leading to D<sub>1</sub> receptor activation upon UV light illumination (360 nm). Induces PKA activation and c-Fos expression in cortical and striatal neurons, with striatal neurons demonstrating a significantly greater detection and sensitivity to sub-second dopamine signals as compared to cortical neurons.

**Physical and Chemical Properties:**

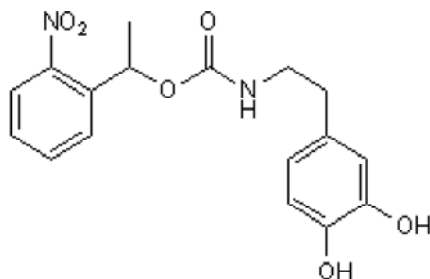
Batch Molecular Formula: C<sub>17</sub>H<sub>18</sub>N<sub>2</sub>O<sub>6</sub>

Batch Molecular Weight: 346.33

Physical Appearance: Yellow solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at -20°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:**

DMSO to 100 mM

ethanol to 100 mM

**CAUTION** - Dopamine is susceptible to oxidation and may decompose in solution. It is recommended that solutions are freshly prepared and used promptly. This product is also extremely hygroscopic. **CAUTION** - This product is extremely hygroscopic and we recommend that it is desiccated upon arrival.

**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:**

**Castro et al** (2013) Striatal neurones have a specific ability to respond to phasic dopamine release. *J.Physiol.* **591** 3197. PMID: 23551948.

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