

# Certificate of Analysis

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**Product Name:** GBR 12783 dihydrochloride

**Catalog No.:** 0513

**Batch No.:** 3

CAS Number: 67469-75-4

IUPAC Name: 1-(2-Diphenylmethoxyethyl)-4-(3-phenyl-2-propenyl)-piperazine dihydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>28</sub>H<sub>32</sub>N<sub>2</sub>O.2HCl

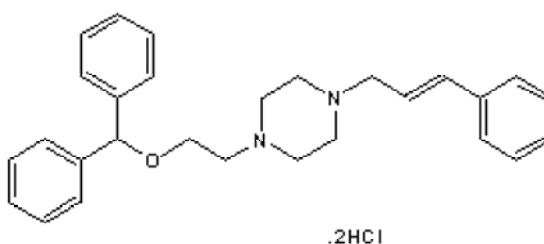
**Batch Molecular Weight:** 485.5

**Physical Appearance:** White solid

**Solubility:** DMSO to 50 mM

**Storage:** Desiccate at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.3 (Ethyl acetate:Hexane [1:4])

**Melting Point:** Between 207 - 208°C

**HPLC:** Shows 99.1% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	69.27	7.06	5.77
Found	69.17	7.18	5.77

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**Description:**

GBR 12783 dihydrochloride is a very potent and selective inhibitor of dopamine uptake (IC<sub>50</sub> for inhibition of [<sup>3</sup>H]-dopamine uptake in rat striatal synaptosomes is 1.8 nM).

**Physical and Chemical Properties:**

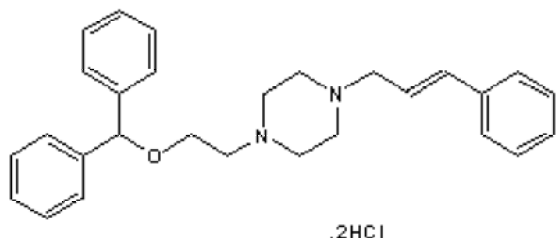
Batch Molecular Formula: C<sub>28</sub>H<sub>32</sub>N<sub>2</sub>O.2HCl

Batch Molecular Weight: 485.5

Physical Appearance: White solid

**Minimum Purity:** ≥99%

**Batch Molecular Structure:**



**Storage:** Desiccate at -20°C

**Solubility & Usage Info:**

DMSO to 50 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°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:**

**Do-Rego *et al*** (1999) Evidence for the sequential formation of two complexes between an uptake inhibitor, GBR 12783 [1-[2-(diphenylmethoxy)ethyl]-4-(3-phenyl-2-propenyl)piperazine], and the neuronal transporter of DA. *J.Neurochem.* **72** 396. PMID: 9886093.

**Giros *et al*** (1992) Cloning, pharmacological characterization and chromosome assignment of the human DA transporter. *Mol.Pharmacol.* **42** 383. PMID: 1406597.

**Vaugeois *et al*** (1992) In vivo labelling of the neuronal DA uptake complex in the mouse striatum by [<sup>3</sup>H]GBR 12783. *Eur.J.Pharmacol.* **210** 77. PMID: 1350989.

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