

Product Name: GBR 12909 dihydrochloride

Catalog No.: 0421

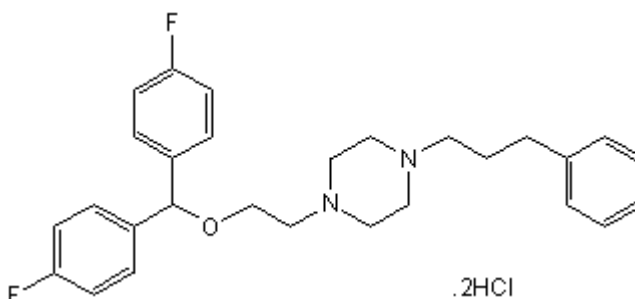
Batch No.: 5

CAS Number: 67469-78-7

IUPAC Name: 1-[2-[Bis-(4-fluorophenyl)methoxy]ethyl]-4-(3-phenylpropyl)piperazine dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₈H₃₂F₂N₂O.2HCl
Batch Molecular Weight: 523.49
Physical Appearance: White solid
Solubility: water to 5 mM with gentle warming
DMSO to 50 mM
Storage: Desiccate at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.81 (Chloroform:Methanol [9:1])
HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	64.24	6.55	5.35
Found	64.06	6.53	5.4

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

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Description:

Potent, competitive inhibitor of dopamine uptake ($K_i = 1$ nM for inhibition of striatal dopamine uptake). Has > 100-fold lower affinity for the noradrenalin and 5-HT uptake carriers. Also a potent sigma ligand ($IC_{50} = 48$ nM). Centrally active following systemic administration.

Physical and Chemical Properties:

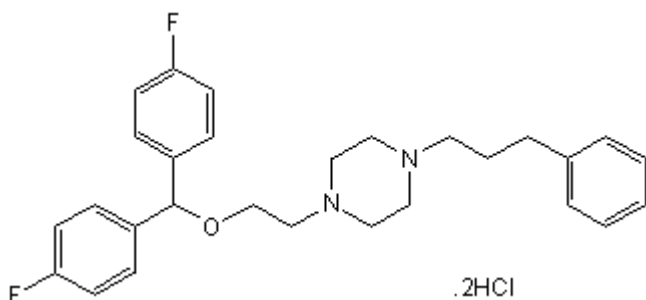
Batch Molecular Formula: $C_{28}H_{32}F_2N_2O \cdot 2HCl$

Batch Molecular Weight: 523.49

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 5 mM with gentle warming
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:

Heikkila and Manzino (1984) Behavioral properties of GBR 12909, GBR 13069 and GBR 13098: specific inhibitors of dopamine uptake. *Eur.J.Pharmacol.* **103** 241. PMID: 6237922.

Andersen (1989) The dopamine uptake inhibitor GBR12909: selectivity and molecular mechanism of action. *Eur.J.Pharmacol.* **166** 493. PMID: 2530094.

Contreras et al (1990) GBR-12909 and fluspirilene potently inhibited binding of [³H] (+)3-PPP to sigma receptors in rat brain. *Life Sci.* **47** PL133. PMID: 1980329.

Spealman and Melia (1991) Pharmacological characterization of the discriminative-stimulus effects of GBR 12909. *J.Pharmacol.Exp.Ther.* **258** 626. PMID: 1678014.

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