

**Product Name:** MDL 100907

**Catalog No.:** 4173

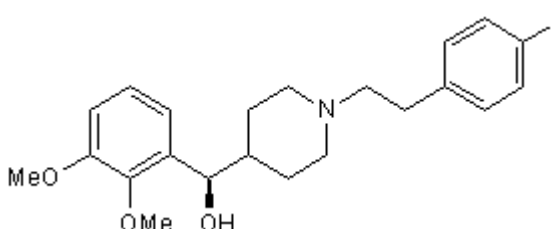
**Batch No.:** 1

**CAS Number:** 139290-65-6

**IUPAC Name:** (R)-(+)- $\alpha$ -(2,3-Dimethoxyphenyl)-1-[2-(4-fluorophenyl)ethyl]-4-piperinemethanol

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>22</sub>H<sub>28</sub>FNO<sub>3</sub>  
**Batch Molecular Weight:** 373.46  
**Physical Appearance:** White solid  
**Solubility:** 1eq. HCl to 50 mM  
DMSO to 100 mM  
ethanol to 100 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.4 (Chloroform:Methanol:NH<sub>4</sub>OH. [90:9:1])  
**HPLC:** Shows >98.8% purity  
**Chiral HPLC:** Shows >99.4% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Optical Rotation:** [α]<sub>D</sub> = +23.2 (Concentration = 2.14, Solvent = Methanol)  
**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	70.75	7.56	3.75
Found	70.57	7.53	3.9

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

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**IUPAC Name:** (R)-(+)- $\alpha$ -(2,3-Dimethoxyphenyl)-1-[2-(4-fluorophenyl)ethyl]-4-piperinemethanol

**Description:**

Potent and selective 5-HT<sub>2A</sub> receptor antagonist ( $K_i$  = 0.36 nM). Exhibits > 80-fold selectivity for 5-HT<sub>2A</sub> over other serotonergic receptor subtypes. Antipsychotic agent in vivo.

**Physical and Chemical Properties:**

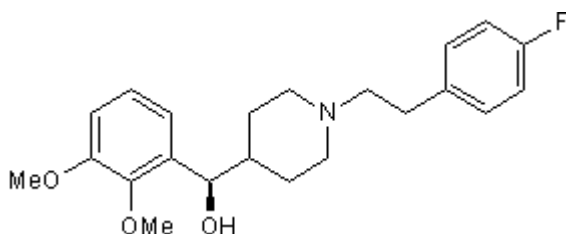
Batch Molecular Formula: C<sub>22</sub>H<sub>28</sub>FNO<sub>3</sub>

Batch Molecular Weight: 373.46

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

1eq. HCl to 50 mM

DMSO to 100 mM

ethanol to 100 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:**

**Sorensen et al** (1993) Characterization of the 5-HT<sub>2</sub> receptor antagonist MDL 100907 as a putative atypical antipsychotic: behavioral, electrophysiological and neurochemical studies. *J.Pharmacol.Exp.Ther.* **266** 684. PMID: 8102646.

**Kehne et al** (1996) Preclinical characterization of the potential of the putative atypical antipsychotic MDL 100,907 as a potent 5-HT<sub>2A</sub> antagonist with a favorable CNS safety profile. *J.Pharmacol.* **277** 968. PMID: 8627580.

**Ardayfio et al** (2008) The 5-hydroxytryptamine<sub>2A</sub> receptor antagonist R-(+)- $\alpha$ -(2,3-dimethoxyphenyl)-1-[2-(4-fluorophenyl)ethyl]-4-piperidinemethanol (M100907) attenuates impulsivity after both drug-induced disruption (dizocilpine) and enhancement (antidepressant drugs) of differential-reinforcement-of-low-rate 72-s behavior in the rat. *J.Pharmacol.Exp.Ther.* **327** 891. PMID: 18772320.

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