

Certificate of Analysis

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Product Name: (+)-Igmesine hydrochloride

Catalog No.: 2332

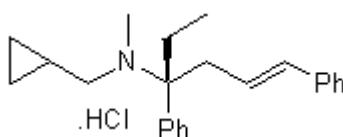
Batch No.: 1

CAS Number: 130152-35-1

IUPAC Name: (R)-(+)-N-Cyclopropylmethyl- α -ethyl-N-methyl- α -[(2E)-3-phenyl-2-propenyl]benzenemethanamine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₃H₂₉CN.HCl
Batch Molecular Weight: 355.94
Physical Appearance: White solid
Solubility: DMSO to 50 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: $[\alpha]_D = +44.4$ (Concentration = 1, Solvent = Methanol)
Microanalysis:

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 77.61 | 8.5 | 3.94 |
| Found | 77.64 | 8.38 | 4.05 |

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

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Description:

Selective σ_1 receptor ligand ($K_D = 19.1$ nM), with little or no activity at σ_2 receptors ($IC_{50} > 1000$ nM). Inhibits the NMDA-induced increase in cGMP in a concentration-dependent manner (IC_{50} value is approximately 100 nM). Weak inhibitor of brain 5-HT uptake in vitro. Exhibits neuroprotective and antidepressant effects.

Physical and Chemical Properties:

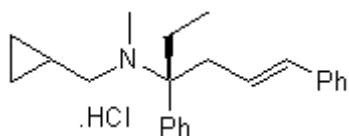
Batch Molecular Formula: C₂₃H₂₉CN.HCl

Batch Molecular Weight: 355.94

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



References:

O'Neill et al (1995) The sigma receptor ligand JO 1784 (igmesine hydrochloride) is neuroprotective in the gerbil model of global cerebral ischaemia. *Eur.J.Pharmacol.* **283** 217. PMID: 7498313.

Akunne et al (2001) Neuropharmacological profile of a selective sigma ligand, igmesine: a potential antidepressant. *Neuropharmacology* **41** 138. PMID: 11445194.

Storage: Store 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.

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