TOCRIS
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Print Date: Jan 15th 2016

Certificate of Analysis

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Product Name: **Milnacipran hydrochloride** **Catalog No.: 3286** **Batch No.: 1**

CAS Number: 101152-94-7

IUPAC Name: (1*R**,2*S**)-2-(Aminomethyl)-*N*,*N*-diethyl-1-phenylcyclopropanecarboxamide hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{15}H_{22}N_2O.HCl$

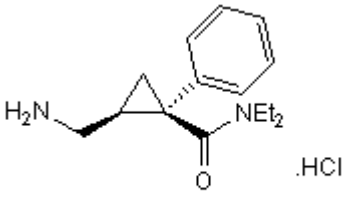
Batch Molecular Weight: 282.81

Physical Appearance: Off-white solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



(and enantiomer)

2. ANALYTICAL DATA

HPLC: Shows >99.9% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	63.71	8.2	9.91
Found	63.71	8.44	9.86

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Description:

Orally active 5-HT and noradrenalin re-uptake inhibitor (SNRI) (IC_{50} values are 203 and 100 nM respectively) that displays no affinity at a range of other receptors. Causes adaptive changes to α_1-adrenergic and 5-HT_{2A} serotonergic systems when administered repeatedly. Exhibits antidepressive and antinociceptive activities in vivo.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{15}H_{22}N_2O.HCl$

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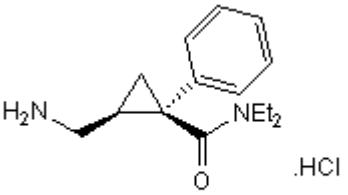
Physical Appearance: Off-white solid

Minimum Purity: >99%

Batch Molecular Structure:



(and enantiomer)

Storage: Store at +4°C

Solubility & Usage Info:

water to 100 mM
DMSO 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:

Moret *et al* (1985) Biochemical profile of midalcipran (F 2207), 1-phenyl-1-diethyl-aminocarbonyl-2-aminomethyl-cyclopropane (z) hydrochloride, a potential fourth generation antidepressant drug. Neuropharmacology ***24*** 1211. PMID: 3005901.

Maj *et al* (2000) Pharmacological effect of milnacipran, a new antidepressant, given repeatedly on the α_1-adrenergic and serotonergic 5-HT_{2A} systems. J.Neural.Transm. ***107*** 1345. PMID: 11145008.

Suzuki *et al* (2008) Antiallodynic and antihyperalgesic effect of milnacipran in mice with spinal nerve ligation. Anesth.Analg. ***106*** 1309. PMID: 18349211.