TOCRIS
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Print Date: Jan 14th 2016

Certificate of Analysis

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Product Name: **ML 10302 hydrochloride** **Catalog No.: 3499** **Batch No.: 2**

CAS Number: 186826-17-5

IUPAC Name: 4-Amino-5-chloro-2-methoxybenzoic acid 2-(1-piperidinyl)ethyl ester hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{15}H_{21}ClN_2O_3.HCl.¼H_2O$

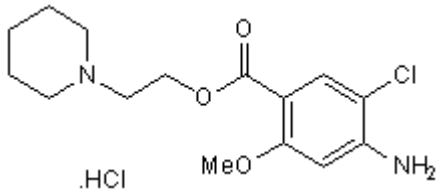
Batch Molecular Weight: 353.75

Physical Appearance: White solid

Solubility: DMSO to 50 mM
ethanol to 20 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.23 (Chloroform:Methanol [9:1])

HPLC: Shows 100% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	50.93	6.41	7.92	20.04
Found	50.9	6.04	7.76	20.29

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Description:

Potent 5-HT_4 partial agonist (EC_{50} = 4 nM) that displays > 680-fold selectivity over 5-HT_3 receptors (K_i values are 1.07 and 730 nM respectively). Increases sAPPα levels in the cortex in an animal model of Alzheimer's disease and exhibits progastrokinetic effects in vivo.

Physical and Chemical Properties:

Batch Molecular Formula: $C_{15}H_{21}ClN_2O_3.HCl.¼H_2O$

Batch Molecular Weight: 353.75

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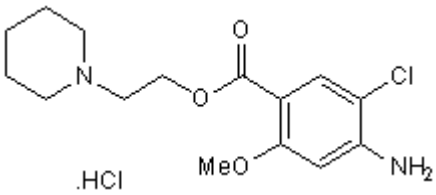
Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

DMSO to 50 mM
ethanol to 20 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:

Yang *et al* (1997) New esters of 4-amino-5-chloro-2-methoxybenzoic acid as potent agonists and antagonists for 5-HT_4 receptors. J.Med.Chem. ***40*** 608. PMID: 9046352.

Ponti *et al* (2001) Intestinal motor stimulation by the 5-HT_4 receptor agonist ML10302: differential involvement of tachykininergic pathways in the canine small bowel and colon. Neurogastroenterol.Mot. ***13*** 543.

Cachard-Chastel *et al* (2007) 5-HT_4 receptor agonists increase sAPPα levels in the cortex and hippocampus of male C57BL/6j mice. Br.J.Pharmacol. ***150*** 883. PMID: 17325649.