bio-techne
TOCRIS

Print Date: Jan 12th 2024

Certificate of Analysis

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Product Name: **Cevimeline hydrochloride** **Catalog No.: 3689** **Batch No.: 4**

CAS Number: 107220-28-0

IUPAC Name: *cis*-2-Methylspiro[1,3-oxathiolane-5,3'-quinuclidine] hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{10}H_{17}NOS.HCl.¼H_2O$

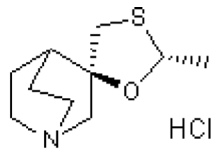
Batch Molecular Weight: 240.27

Physical Appearance: White solid

Solubility: water to 75 mM
DMSO to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



(and enantiomer)

2. ANALYTICAL DATA

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	49.99	7.76	5.83
Found	49.4	7.8	5.69

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Description:

Cevimeline hydrochloride is a selective M_1 receptor agonist. Induces atropine-sensitive contractions of isolated guinea pig ilea and trachea preparations (EC_{50} values are 3.5 and 3 µM respectively). Reverses AF64A-induced cognitive impairments in vivo.

Physical and Chemical Properties:

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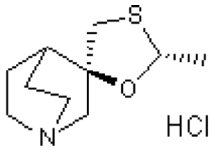

(and enantiomer)

Storage: Store at -20°C

Solubility & Usage Info:

water to 75 mM
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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:

Hargreaves *et al* (1992) L-689,660, a novel cholinomimetic with functional selectivity for M_1 and M_3 muscarinic receptors. Br.J.Pharmacol. ***107*** 494. PMID: 1422595.

Fisher *et al* (1991) (+/-)-*cis*-2-methyl-spiro(1,3-oxathiolane-5,3')quinuclidine, an M_1 selective cholinergic agonist, attenuates cognitive dysfunctions in an animal model of Alzheimer's disease. J.Pharmacol.Exp.Ther. ***257*** 392. PMID: 2019998.

Wanibuchi *et al* (1990) Pharmacological studies on novel muscarinic agonists, 1-oxa-8-azaspiro[4.5]decane derivatives, YM796 and YM954. Eur.J.Pharmacol. ***187*** 479. PMID: 1963596.