

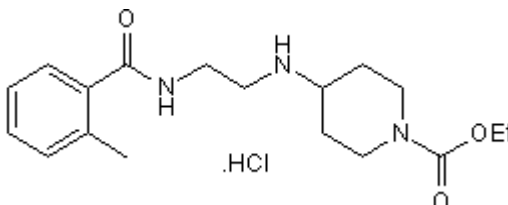
## Certificate of Analysis

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**Product Name:** VU 0357017 hydrochloride **Catalog No.:** 4295 **Batch No.:** 3  
**CAS Number:** 1135242-13-5  
**IUPAC Name:** 4-[[2-[(2-Methylbenzoyl)amino]ethyl]amino]-1-piperidinecarboxylic acid ethyl ester hydrochloride

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>18</sub>H<sub>27</sub>N<sub>3</sub>O<sub>3</sub>·HCl  
**Batch Molecular Weight:** 369.89  
**Physical Appearance:** White solid  
**Solubility:** water to 25 mM  
DMSO to 5 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.6 (Dichloromethane:Methanol [9:1])  
**HPLC:** Shows 99.4% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	58.45	7.63	11.35
Found	58.5	7.87	11.37

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**Description:**

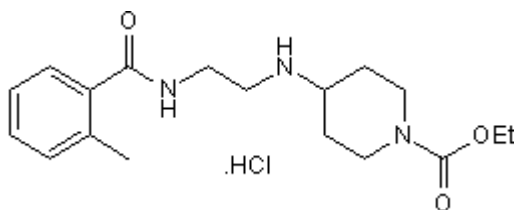
Positive allosteric modulator of muscarinic M<sub>1</sub> receptors (EC<sub>50</sub> = 198 nM). Displays no activity at M<sub>2</sub>-M<sub>5</sub> at concentrations up to 30 μM. Potentiates NMDA receptor currents in hippocampal neurons; activity reverses cognitive deficits in a rodent model of hippocampal-dependent memory. CNS penetrant.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>18</sub>H<sub>27</sub>N<sub>3</sub>O<sub>3</sub>.HCl  
 Batch Molecular Weight: 369.89  
 Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**Bridges et al** (2010) Chemical lead optimization of a pan G<sub>q</sub> mAChR M<sub>1</sub>, M<sub>3</sub>, M<sub>5</sub> positive allosteric modulator (PAM) Lead. Part II. Development of potent and highly selective M<sub>1</sub> PAM. *Bioorg.Med.Chem.Lett.* **20** 1972. PMID: 20156687.

**Lebois et al** (2010) Discovery and characterization of novel subtype-selective allosteric agonists for the investigation of M<sub>1</sub> receptor function in the central nervous system. *ACS Chem.Neurosci.* **1** 104.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

water to 25 mM  
 DMSO to 5 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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