

## Certificate of Analysis

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**Product Name:** AR-R 17779 hydrochloride

**Catalog No.:** 3964

**Batch No.:** 2

**CAS Number:** 178419-42-6

**IUPAC Name:** (3S)-Spiro[1-azabicyclo[2.2.2]octane-3,5'-oxazolidine]-2'-one hydrochloride

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>9</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>.HCl.½H<sub>2</sub>O

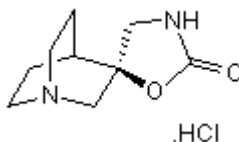
**Batch Molecular Weight:** 227.69

**Physical Appearance:** Off-white solid

**Solubility:** DMSO to 50 mM  
water to 100 mM

**Storage:** Desiccate at RT

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.1 (Chloroform:Methanol [2:1])

**Chiral HPLC:** Shows 99.3% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Optical Rotation:** [α]<sub>D</sub> = +62 (Concentration = 1, Solvent = Methanol)

**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	47.48	7.08	12.3
Found	47.14	7	12.37

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

## Product Information

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### Description:

Selective agonist of  $\alpha 7$  nAChRs ( $K_i$  values are 190 and 16000 nM for rat  $\alpha 7$  and  $\alpha 4\beta 2$  receptors respectively). CNS penetrant after systemic administration.

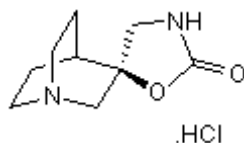
### Physical and Chemical Properties:

Batch Molecular Formula:  $C_9H_{14}N_2O_2 \cdot HCl \cdot \frac{1}{2}H_2O$

Batch Molecular Weight: 227.69

Physical Appearance: Off-white solid

### Batch Molecular Structure:



**Storage:** Desiccate at RT

### Solubility & Usage Info:

DMSO to 50 mM

water to 100 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival.

### 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:

**Grottick et al** (2000) Evidence that nicotinic  $\alpha 7$  receptors are not involved in the hyperlocomotor and rewarding effects of nicotine. *J.Pharmacol.Exp.Ther.* **294** 1112. PMID: 10945867.

**Mullen et al** (2000) (-)-spiro[1-azabicyclo[2.2.2]octane-3,5'-oxazolidin-2'-one], a conformationally restricted analogue of acetylcholine, is a highly selective full agonist at the  $\alpha 7$  nicotinic acetylcholine receptor. *J.Med.Chem.* **43** 4045. PMID: 11063601.

**Huang et al** (2010) Activation of presynaptic  $\alpha 7$  nicotinic receptors evokes an excitatory response in hippocampal CA3 neurones in anaesthetized rats: an *in vivo* iontophoretic study. *Br.J.Pharmacol.* **159** 554. PMID: 20105181.

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