

Product Name: NS 6784 hydrochloride

Catalog No.: 6140

Batch No.: 1

IUPAC Name: 4-(5-Phenyl-1,3,4-oxadiazol-2-yl)-1,4-diazabicyclo[3.2.2]nonane hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅H₁₈N₄O.HCl.¼H₂O

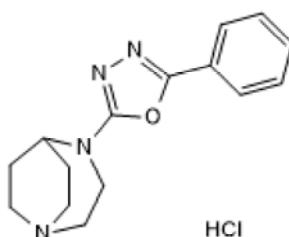
Batch Molecular Weight: 311.29

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 20 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.1 (Dichloromethane:Methanol [9:1])

HPLC: Shows 100% purity

¹H NMR: consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	57.88	6.31	18
Found	57.89	6.18	17.84

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Description:

$\alpha 7$ nAChR agonist at human and rat receptors (EC_{50} of 0.72 and 0.88 μ M respectively). Stimulates $\alpha 7$ nAChR induced ERK phosphorylation in vitro and enhances avoidance learning in mice. Also evokes Ca^{2+} transients in IMR-32 neuroblastoma cells, with similar potency to PNU 282987 (Cat.No. 2303).

Physical and Chemical Properties:

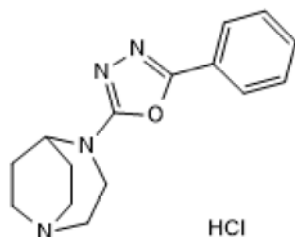
Batch Molecular Formula: $C_{15}H_{18}N_4O \cdot HCl \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 311.29

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

water to 100 mM

DMSO 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:

Ween *et al* (2010) $\alpha 3^*$ and $\alpha 7$ nAChR-mediated Ca^{2+} transient generation in IMR-32 neuroblastoma cells. *Neurochem.Int.* **57** 269. PMID: 20558224.

Briggs *et al* (2009) Role of channel activation in cognitive enhancement mediated by $\alpha 7$ nicotinic acetylcholine receptors. *Br.J.Pharmacol.* **158** 1486. PMID: 19845675.

Kouhen *et al* (2009) Pharmacology of $\alpha 7$ nicotinic acetylcholine receptor mediated extracellular signal-regulatedkinase signalling in PC12 cells. *Br.J.Pharmacol.* **156** 638. PMID: 19226255.

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