

PNU-282987

Chemical Properties

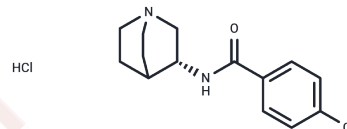
CAS No. : 123464-89-1

Formula: C₁₄H₁₈Cl₂N₂O

Molecular Weight: 301.21

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	PNU-282987 is a selective $\alpha 7$ nicotinic acetylcholine receptor ($\alpha 7$ nAChR) agonist with K_i of 26 nM; no affinity for $\alpha 1\beta 1\gamma \delta$ and $\alpha 3\beta 4$ nAChRs ($IC_{50} \geq 60 \mu M$).
Targets(IC_{50})	AChR
Kinase Assay	Kinase inhibition assays : Kinase inhibition is measured by the use of radiometric assays conducted by Kinase Profiler service. Briefly, in the presence or absence of SKLB1002, VGFR2 (5–10 mU) is incubated in 25- μ L reaction solution containing 8 mmol/L 3-(N-morpholino)propanesulfonic acid (MOPS), pH 7.0, 0.2 mmol/L EDTA, 0.33 mg/mL myelin basic protein, 10 mmol/L Mg acetate, and γ -[³³ P]ATP. After incubation for 40 minutes at room temperature, the reaction is stopped and 10 μ L of the reaction solution is then spotted onto a P30 filtermat and washed 3 times for 5 minutes in 75 mmol/L phosphoric acid and once in methanol prior to scintillation counting.

Solubility Information

Solubility	DMSO: 50 mg/mL (166 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3199 mL	16.5997 mL	33.1994 mL
5 mM	0.664 mL	3.3199 mL	6.6399 mL
10 mM	0.332 mL	1.660 mL	3.3199 mL
50 mM	0.0664 mL	0.332 mL	0.664 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Bodnar AL, et al. J Med Chem. 2005 Feb 24;48(4):905-8.

Zhang T, Yang K, Chen Y, et al. Impaired autophagy flux by lncRNA NEAT1 is critical for inflammation factors production in human periodontal ligament stem cells with nicotine treatment. Journal of Periodontal Research. 2022

Geng Y X, Lv H, Liu Y, et al. Electroacupuncture at Zusanli (ST36) Alleviate Intestinal Ischemia-Reperfusion Injury by Regulating the Cholinergic-miRNA 124 Pathway. Neurogastroenterology & Motility. 2024: e14971.

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