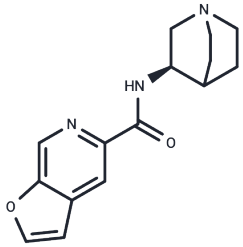
Data Sheet (Cat.No.T23145)

TargetMol

PHA 543613

Chemical Properties



CAS No. : 478149-53-0

Formula: C15H17N3O2

Molecular Weight: 271.31

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	PHA 543613 is a specific agonist of α7 nAChR (Ki = 8.8 nM) and can be used in studies about the cognitive deficits of Alzheimer's disease and schizophrenia.
Targets(IC50)	AChR
In vivo	In rats, PHA-543613 (0.3 mg/kg) reverses Scopolamine-induced short-term memory deficits[2]. Intraperitoneal injection of PHA-543613 (4 and 12 mg/kg) increases p-Akt and decreases p-GSK-3 and CC3 expressions in the ipsilateral hemisphere. PHA-543613 reduces neuronal cell death in the perihematomal area[3].

Solubility Information

Solubility	DMSO: 225 mg/mL (829.31 mM),Sonication is recommended. H2O: < 30.78 mg/mL,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6858 mL	18.4291 mL	36.8582 mL
5 mM	0.7372 mL	3.6858 mL	7.3716 mL
10 mM	0.3686 mL	1.8429 mL	3.6858 mL
50 mM	0.0737 mL	0.3686 mL	0.7372 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Donn G Wishka, et al. Discovery of N-[(3R)-1-azabicyclo[2.2.2]oct-3-yl]furo[2,3-c]pyridine-5-carboxamide, an agonist of the alpha7 nicotinic acetylcholine receptor, for the potential treatment of cognitive deficits in schizophrenia: synthesis and structure--activity relationship. J Med Chem. 2006 Jul 13;49(14):4425-36. [Content Brief]

Nóra Bruszt, et al. Potentiation of cognitive enhancer effects of Alzheimer's disease medication memantine by alpha7 nicotinic acetylcholine receptor agonist PHA-543613 in the Morris water maze task. Psychopharmacology (Berl). 2021 Nov;238(11):3273-3281.

Krafft PR, et al. α7 nicotinic acetylcholine receptor agonism confers neuroprotection through GSK-3β inhibition in a mouse model of intracerebral hemorrhage.