

## PQCA

## Chemical Properties

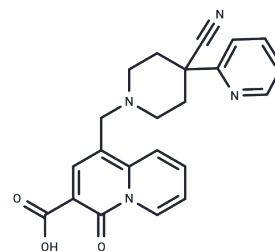
CAS No. : 1144504-35-7

Formula: C<sub>22</sub>H<sub>20</sub>N<sub>4</sub>O<sub>3</sub>

Molecular Weight: 388.42

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	PQCA is a muscarinic M1 receptor-positive allosteric regulator, which is highly selective and effective. PQCA exhibited EC <sub>50</sub> values of 49 nM in rhesus monkey and 135 nM in human M1 receptors, but showed no activity against other muscarinic receptors. PQCA is a potential compound for reducing cognitive deficits associated with Alzheimer's disease.
Targets(IC <sub>50</sub> )	AChR
In vivo	In male rhesus monkeys, oral administration of PQCA (3-30 mg/kg) effectively mitigates the cognitive impairments induced by scopolamine in both the paired-associates learning (PAL) and the continuous performance task (CPT). Scopolamine-induced blockade of muscarinic signaling results in significant deficits in performance on both tasks. [1]

## Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble or slightly soluble), Sonication and heating to 80°C are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.5745 mL	12.8727 mL	25.7453 mL
5 mM	0.5149 mL	2.5745 mL	5.1491 mL
10 mM	0.2575 mL	1.2873 mL	2.5745 mL
50 mM	0.0515 mL	0.2575 mL	0.5149 mL

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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

Lange HS, et al. The M1 Muscarinic Positive Allosteric Modulator PQCA Improves Performance on Translatable Tests of Memory and Attention in Rhesus Monkeys. *J Pharmacol Exp Ther.* 2015;355(3):442-450.

Uslaner JM, et al. The muscarinic M1 receptor positive allosteric modulator PQCA improves cognitive measures in rat, cynomolgus macaque, and rhesus macaque. *Psychopharmacology (Berl).* 2013;225(1):21-30.

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