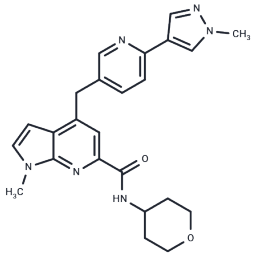
Data Sheet (Cat.No.T69780)

TargetMol

VU6007477

Chemical Properties



CAS No. : 2220141-46-6

Formula: C24H26N6O2

Molecular Weight: 430.5

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	VU6007477 is a brain-penetrant and selective M1 muscarinic receptor positive allosteric modulator (PAM) with an EC50 value of 230 nM, characterized by improved central nervous system penetration compared with hydroxylated congeners, moderate permeability as a human P-glycoprotein substrate, a pyranyl amide chemical scaffold, and strong suitability for experimental investigations into robust cholinergic seizure activity, central cholinergic signaling, and neurological disease models requiring reliable CNS exposure.
Targets(IC50)	AChR
In vitro	**Method**: A series of M1 positive allosteric modulators based on a pyrrolo[2,3-b]pyridine core were generated via scaffold hopping and iterative parallel synthesis and evaluated in rat M1 receptor assays and in vivo CNS exposure and adverse event studies. **Result**: Removal of a secondary hydroxyl group yielded VU6007477, which showed good rat M1 PAM potency (EC50 = 230 nM, 93% ACh max), minimal agonist activity (agonist EC50 > 10 μM), good CNS penetration in rats and mice, and no cholinergic seizure liability[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3229 mL	11.6144 mL	23.2288 mL
5 mM	0.4646 mL	2.3229 mL	4.6458 mL
10 mM	0.2323 mL	1.1614 mL	2.3229 mL
50 mM	0.0465 mL	0.2323 mL	0.4646 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

VU6007477, a Novel M1 PAM Based on a Pyrrolo2,3-bpyridine Carboxamide Core Devoid of Cholinergic Adverse Events | ACS Medicinal Chemistry Letters Internet. cited 2025 Dec 31. Available from: https://pubs.acs.org/doi/10.1021/acsmedchemlett.8b00261

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