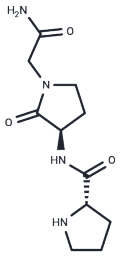
Data Sheet (Cat.No.T23121)

PAOPA

Chemical Properties



CAS No. : 114200-31-6

Formula: C11H18N4O3

Molecular Weight: 254.29

Storage: Keep away from moisture
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	PAOPA belongs to natural product derivatives and serves as an allosteric modulator of the dopamine D2 receptor, possessing the characteristic of promoting binding between high-affinity D2 receptors and agonists. This compound finds application in preclinical studies for schizophrenia and extrapyramidal dysfunction, effectively alleviating behavioral and biochemical abnormalities in rodent models.
Targets(IC50)	Dopamine Receptor
In vitro	**Methods**: D2/eYFP-labeled cells were treated with 10 μM PAOPA for 1.5 hours and 48 hours, respectively. GRK2, arrestin-3, phosphorylated ERK1/2 expression, and D2 receptor internalization were subsequently detected. **Results**: Treatment for 1.5 hours increased striatal GRK2 expression and promoted the expression of arrestin-3, p-ERK1, and p-ERK2; treatment for 48 hours facilitated D2 receptor internalization. [1]
In vivo	**Methods**: In mice, PAOPA (1 mg/kg) was administered via intraperitoneal injection once daily for 45 consecutive days to evaluate its effects on D2 receptors and downstream molecules. **Results**: Chronic administration induced D2 receptor modulation and increased the expression of downstream molecules GRK2, arrestin-3, and ERK1/2. [1]

Solubility Information

Solubility	DMSO: 45 mg/mL (176.96 mM),Sonication is recommended. H2O: <25.43 mg/mL,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9325 mL	19.6626 mL	39.3252 mL
5 mM	0.7865 mL	3.9325 mL	7.865 mL
10 mM	0.3933 mL	1.9663 mL	3.9325 mL
50 mM	0.0787 mL	0.3933 mL	0.7865 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

Beyaert MG, et al. PAOPA, a potent dopamine D2 receptor allosteric modulator, prevents and reverses behavioral and biochemical abnormalities in an amphetamine-sensitized preclinical animal model of schizophrenia. Eur Neuropsychopharmacol. 2013 Mar;23(3):253-62.