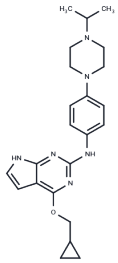
Data Sheet (Cat.No.T212596)

TargetMol

ARUK2010489

Chemical Properties



CAS No. :

Formula: C23H30N6O

Molecular Weight: 406.53

Storage: Store at low temperature
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	ARUK2010489 (Compound 23) is a potent, selective, and brain-penetrant NUAK1 inhibitor with a pIC50 of 8.7, also exhibiting partial inhibitory activity against CDK2, CDK4, and CDK6 at micromolar concentrations, and it is applied in neurological disease research, including mechanistic studies related to Alzheimer's disease.
Targets(IC50)	CDK,AMPK
In vitro	**Method**: Optimization of the CDK2 inhibitor NU6140 was performed to generate selective NUAK1 inhibitors, followed by pharmacokinetic and brain penetration studies in mice. **Result**: ARUK2010694 showed improved plasma half-life, while ARUK2010489 demonstrated high brain penetration (mouse Kp,u,ub = 2.29) and selective NUAK1 inhibition without CDK2 activity[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4598 mL	12.2992 mL	24.5984 mL
5 mM	0.492 mL	2.4598 mL	4.9197 mL
10 mM	0.246 mL	1.2299 mL	2.4598 mL
50 mM	0.0492 mL	0.246 mL	0.492 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

Aldred GG, Boffey HK, Willems HMG, Winpenny D, Scott H, Clarke JH, et al. Development of Purine and Pyrrolopyrimidine Scaffolds as Potent, Selective, and Brain Penetrant NUAK1 Inhibitors. ACS Med Chem Lett. 2025 Nov 13;16(11):2264-72.

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