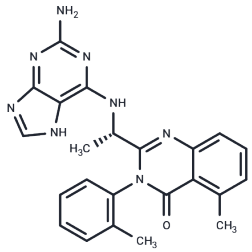
Data Sheet (Cat.No.T10660)

TargetMol

CAL-130

Chemical Properties



CAS No. : 1431697-74-3

Formula: C23H22N8O

Molecular Weight: 426.47

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	CAL-130 is a PI3Kδ and PI3Kγ inhibitor [IC50s: 1.3 and 6.1 nM].
Targets(IC50)	PI3K
In vitro	CAL-130 selectively inhibits the catalytic domains of p110γ and p110δ (IC50s: 1.3 and 6.1 nM for p110δ and p110γ, 115 and 56 nM for p110α and p110β) without affecting other intracellular signaling pathways such as p38 MAPK or insulin receptor tyrosine kinase, which are essential for overall cell function and survival.
In vivo	The clinical impact of inhibiting both PI3Kγ and PI3Kδ activities is assessed through the administration of CAL-130 to Lck/Pten^fl/fl mice suffering from established T cell acute lymphoblastic leukemia. Selection of mice for the survival study is based on criteria including poor health appearance, a white blood cell count exceeding 45,000/μL, presence of blast cells in peripheral blood smear, and over 75% of circulating cells being double-positive for Thy1.2 and Ki-67 markers. These mice are then treated with an oral dosage (10 mg/kg) of CAL-130 every eight hours for a week, and their health outcomes are monitored until they become moribund. Despite the short treatment period, CAL-130 significantly increases the median survival rate of these mice to 45 days, in stark contrast to the 7.5 days survival of the control group.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3448 mL	11.7242 mL	23.4483 mL
5 mM	0.469 mL	2.3448 mL	4.6897 mL
10 mM	0.2345 mL	1.1724 mL	2.3448 mL
50 mM	0.0469 mL	0.2345 mL	0.469 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

Subramaniam Prem S, et al. Targeting nonclassical oncogenes for therapy in T-ALL. Cancer cell (2012), 21(4), 459-72.