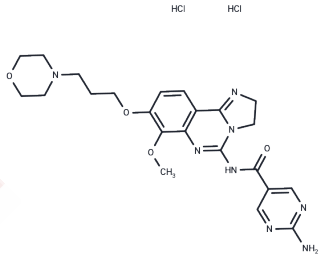
Data Sheet (Cat.No.T14998)

TargetMol

Copanlisib dihydrochloride

Chemical Properties



CAS No. : 1402152-13-9

Formula: C23H30Cl2N8O4

Molecular Weight: 553.44

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	Copanlisib dihydrochloride (BAY 80-6946 dihydrochloride) is an ATP-competitive pan-class I PI3K inhibitor, with IC50 values of 0.5 nM for PI3Kα, 0.7 nM for PI3Kδ, 3.7 nM for PI3Kβ, and 6.4 nM for PI3Kγ. It exhibits superior antitumor activity and demonstrates more than 2,000-fold selectivity against other lipid and protein kinases, except for mTOR.
Targets(IC50)	Apoptosis,mTOR,PI3K
In vitro	In both KPL4 cells and LPA-stimulated PC3 cells, BAY 80-6946 reduces pAKT levels. In a subset of human cancer cell lines with PIK3CA mutations and/or overexpression of HER2, BAY 80-6946 shows antiproliferative activity and induces apoptosis. [1] The combination of HER2-targeted therapies and BAY 80-6946 inhibits growth more effectively than either therapy used alone, and can restore sensitivity to trastuzumab and lapatinib in cells. [2]
In vivo	In rat KPL4 or HCT116 tumor xenograft model, BAY 80-6946 (6 mg/kg, i.v.) induces 100% complete tumor regression. In nude mice with Lu7860 erlotinib-resistant, patient-derived NSCLC and MAXF1398 patient-derived luminal breast tumor models, BAY 80-6946 (14 mg/kg, i.v.) also causes tumor growth inhibition. [1]

Solubility Information

Solubility	DMSO: 1 mg/mL (1.81 mM),Sonication is recommended. H2O: 125 mg/mL (225.86 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8069 mL	9.0344 mL	18.0688 mL
5 mM	0.3614 mL	1.8069 mL	3.6138 mL
10 mM	0.1807 mL	0.9034 mL	1.8069 mL
50 mM	0.0361 mL	0.1807 mL	0.3614 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

Liu N, et al. Mol Cancer Ther. 2013, 12(11), 2319-2330.
Xiong W, Jia L, Cai Y, et al.Evaluation of the anti-inflammatory effects of PI3Kδ/γ inhibitors for treating acute lung injury.Immunobiology.2023: 152753.
Elster N, et al. Breast Cancer Res Treat. 2015, 149(2), 373-383.