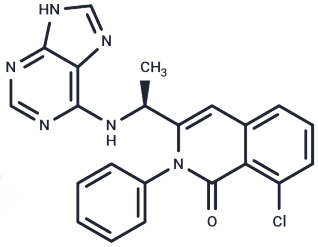
# Data Sheet (Cat.No.T1988)

TargetMol

## Duvelisib

### Chemical Properties



CAS No. : 1201438-56-3

Formula: C22H17ClN6O

Molecular Weight: 416.86

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

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|---|---|
| Description | Duvelisib (INK1197, IPI-145) is a selective inhibitor of phosphatidylinositol 3-kinase (PI3K) and p100δ, with effects on p110δ (IC50 value is 0.0025 μM), p110γ (IC50 value is 0.274 μM), p110β (IC50 value is 0.85 μM) and p110α (IC50 value is 1.602 μM). |
| Targets(IC50) | PI3K |
| In vitro | **METHODS**: Primary AML blasts (AML#2 and AML#5) were treated with Duvelisib (INK1197, IPI-145) (0.1, 0.5, 1 μM) and cultured for 4 hours. They were then incubated with BMSC conditioned medium for 5 minutes. Whole cell extracts were prepared and Western blot analysis was performed for pAKT (s473 and t308) and total AKT, as well as pMAPK and total MAPK.<br>**RESULTS** Duvelisib (INK1197, IPI-145) inhibited BMSC CM-induced pAKT (s473 and t308) activation at 0.1 μM; Duvelisib (INK1197, IPI-145) blocked blast migration through its inhibitory effect on AKT phosphorylation at the t308 site. [1] |
| In vivo | **METHODS**: We used an Eμ-TCL1 adoptive transfer mouse model of CLL. After Duvelisib (INK1197, IPI-145) (100 mg/kg, once daily, oral, for 21 days),<br>**RESULTS** Duvelisib (INK1197, IPI-145) significantly reduced the CLL burden (CD19 CD5 B cells) in the peripheral blood of mice; at the same time, the total number of CD3 T cells in the mice was also lower, but the CD4/CD8 ratio was also reduced. [2] |

### Solubility Information

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|---|---|
| Solubility | H2O: < 1 mg/mL (insoluble or slightly soluble),<br>Ethanol: < 1 mg/mL (insoluble or slightly soluble),<br>DMSO: < 1 mg/mL (insoluble)<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.3989 mL | 11.9944 mL | 23.9889 mL |
| 5 mM | 0.4798 mL | 2.3989 mL | 4.7978 mL |
| 10 mM | 0.2399 mL | 1.1994 mL | 2.3989 mL |
| 50 mM | 0.048 mL | 0.2399 mL | 0.4798 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

Pillinger G, et al. Targeting PI3Kδ and PI3Kγ signalling disrupts human AML survival and bone marrow stromal cell mediated protection. Oncotarget. 2016 Jun 28;7(26):39784-39795.
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.
Liu B, Lu T, Ding M, et al.Targeting TTK Inhibits Tumorigenesis of T-Cell Lymphoma Through Dephosphorylating p38α and Activating AMPK/mTOR Pathway.Advanced Science.2413990
Maharaj K, et al. The dual PI3Kδ/CK1ε inhibitor umbralisib exhibits unique immunomodulatory effects on CLL T cells. Blood Adv. 2020 Jul 14;4(13):3072-3084.
Blair HA. Duvelisib: First Global Approval. Drugs. 2018 Nov;78(17):1847-1853.



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