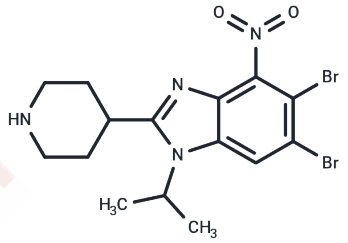
Data Sheet (Cat.No.T39085)

TargetMol

Dapolsertib

Chemical Properties



CAS No. : 1616359-00-2

Formula: C15H18Br2N4O2

Molecular Weight: 446.14

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	Dapolsertib (SEL24-B489) is an orally bioavailable and potent PIM and FLT3-ITD inhibitor, inhibiting PIM1, PIM2, and PIM3, decreasing PIM substrate phosphorylation, and inducing dose-dependent apoptosis in leukemia cells.
Targets(IC50)	Apoptosis,FLT,Pim
In vitro	In MOLM-13 and to a lesser extent in MV4-11 cells, a dose-dependent disruption of cell cycle with especially pronounced depletion of the S phase after treatment with Dapolsertib, accompanied by PARP cleavage and apoptosis was observed [1] . Dapolsertib causes a profound inhibition of S6 (S 235/236), but has little effect on PI3K/mTOR signaling [1] . Dapolsertib inhibits STAT5 (Ser 726) and reduced expression of MCL1, whereas none of the selective inhibitors altered c-MYC abundance or induced PARP cleavage [1] . Cell Viability Assay Cell Line: AZD1208, AC220 and AraC in AmL cell lines. Concentration: 0-10 μM. Incubation Time: 72 h. Result: Decreased viability.
In vivo	Dapolsertib (25-100 mg/kg, orally) exhibited activity in AmL in vivo models [1] . Dapolsertib induces apoptosis of DLBCL cell lines in low/sub-micromolar concentrations and exhibits activity in a xenograft model [2] . Animal Model: SCID/beige mice bearing MV-4-11 tumors (FLT3-ITD+) [1] . Dosage: 50, 75 and 100 mg/kg. Administration: Orally, twice daily. Result: Marked dose - dependent tumor reduction (67%, 74% and 82% tumor growth inhibition (TGI) for 50, 75 and 100 mg/kg daily doses, respectively).

Solubility Information

Solubility	DMSO: 15 mg/mL (33.62 mM),when pH is adjusted to 2 with HCl, sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.48 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2414 mL	11.2072 mL	22.4145 mL
5 mM	0.4483 mL	2.2414 mL	4.4829 mL
10 mM	0.2241 mL	1.1207 mL	2.2414 mL
50 mM	0.0448 mL	0.2241 mL	0.4483 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

Wojciech Czardybon, A novel, dual pan-PIM/FLT3 inhibitor SEL24 exhibits broad therapeutic potential in acute myeloid leukemia. Oncotarget. 2018 Mar 30;9(24):16917-16931.

Ewa Jablonska, et al. A Novel Pan-PIM Kinase Inhibitor, SEL24-B489, Induces Apoptosis and Inhibits Proliferation of Diffuse Large B-Cell Lymphoma Cells through Inhibition of Protein Translation and Attenuation of Myc and NFkB Activity. Blood (2015) 126 (23): 706.