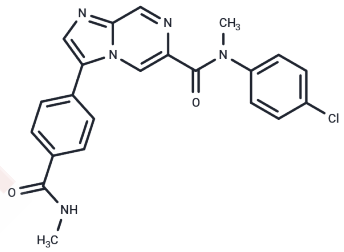
Data Sheet (Cat.No.T5421)

TargetMol

KDU691

Chemical Properties



CAS No. : 1513879-19-0

Formula: C22H18ClN5O2

Molecular Weight: 419.86

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

Description	KDU691 is a PI4K inhibitor.
Targets(IC50)	Parasite,PI4K
In vivo	KDU691 was evaluated for in vivo activity in rhesus macaques infected with P. cynomolgi sporozoites.?The prophylactically treated monkeys failed to become blood smear positive, while untreated control animals showed normal parasitemia development (primary parasitemia at day 8.9 p.i., with the first relapse within a month).?Thus, 5-day oral treatment with 20 mg/kg of KDU691 shortly after infection eradicated all liver-stage parasites, including hypnozoites.
Animal Research	Sporozoites were harvested from P. cynomolgi-infected mosquitoes, washed with phosphate-buffered saline (PBS), and diluted to 100,000 sporozoites (spz)/ml in PBS. One-milliliter aliquots of sporozoites were prepared and injected into monkeys via intravenous injection. During treatment, monkeys were weighed daily and received the compound via gavage, followed by gastric feeding. Monkeys in the prophylaxis groups were treated 20 min after the i.v. sporozoite injection. The other monkeys were treated when all the monkeys in the experiment (except those in the prophylaxis group) were blood-stage patent (at day 11 p.i.). To kill the blood-stage parasites, all monkeys received a 5-day treatment of 7.5 mg/kg of body weight of chloroquine (CQ), during compound dosing. KDU691 was formulated in 0.5% methylcellulose and 0.5% Tween 80 in water. LMV599 was formulated as a solid dispersion in a solution containing 5.6% (wt/wt) Tween 80 44.4% hydroxypropyl methylcellulose (HPMC) E3 38.9% Soluplus 11.1% vitamin E d-alphatocopheryl polyethylene glycol 1000 succinate.

Solubility Information

Solubility	DMSO: 150 mg/mL (357.26 mM),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: 4 mg/mL (9.53 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3817 mL	11.9087 mL	23.8175 mL
5 mM	0.4763 mL	2.3817 mL	4.7635 mL
10 mM	0.2382 mL	1.1909 mL	2.3817 mL
50 mM	0.0476 mL	0.2382 mL	0.4763 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

Zeeman A M , Lakshminarayana S B , Werff N V D , et al. PI4 Kinase Is a Prophylactic but Not Radical Curative Target in Plasmodium vivax-Type Malaria Parasites[J]. Antimicrobial Agents & Chemotherapy, 2016, 60(5):AAC. 03080-15.