

LysRs-IN-2

Chemical Properties

CAS No. : 2170696-76-9

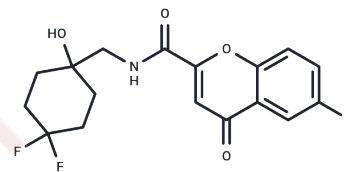
Formula: C₁₇H₁₆F₃N₂O₄

Molecular Weight: 355.31

Store at low temperature

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	LysRs-IN-2 is a lysine tRNA synthetase (KRS) inhibitor with antiparasitic activity that inhibits Plasmodium falciparum KRS (PfKRS) and Cryptosporidium minum KRS (CpKRS), and is used in the study of malaria infections.
Targets(IC50)	Others
In vitro	LysRs-IN-2 is a lysyl-tRNA synthetase (KRS) inhibitor with half inhibitory concentrations (IC ₅₀) of 0.015 μM and 0.13 μM for Plasmodium falciparum lysyl-tRNA synthetase (PfKRS) and Cryptosporidium lysyl-tRNA synthetase (CpKRS) respectively.[1] LysRs-IN-2 showed significant activity against P. falciparum strain 3D7 (EC ₅₀ =0.27 μM), human lysyl-tRNA synthetase (HsKRS) (IC ₅₀ =1.8 μM), HepG2 cells (EC ₅₀ =49 μM), and Cryptosporidium minis (EC ₅₀ =2.5 μM) in a whole-cell assay. [1]
In vivo	In the P. falciparum SCID mouse model, LysRs-IN-2 (1.5 mg/kg; orally once daily for 4 days) reduced parasitemia levels by 90%. In NOD SCID gamma mice and INF-γ knockout mice (Cryptosporidium minis model), LysRs-IN-2 (20 mg/kg; orally once daily for 7 days) significantly reduced parasite excretion. [1]

Solubility Information

Solubility	DMSO: 50 mg/mL (140.72 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: 2 mg/mL (5.63 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8144 mL	14.0722 mL	28.1444 mL
5 mM	0.5629 mL	2.8144 mL	5.6289 mL
10 mM	0.2814 mL	1.4072 mL	2.8144 mL
50 mM	0.0563 mL	0.2814 mL	0.5629 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

Baragaña B, et al. Lysyl-tRNA synthetase as a drug target in malaria and cryptosporidiosis. Proc Natl Acad Sci U S A. 2019 Apr 2;116(14):7015-7020.

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