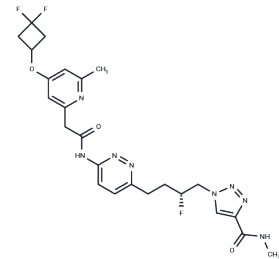


IPN60090

Chemical Properties

CAS No. : 1853164-83-6
 Formula: C₂₄H₂₇F₃N₈O₃
 Molecular Weight: 532.52
 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	IPN60090 is a novel, potent, orally bioavailable, renal-type glutaminase (GLS1)-specific inhibitor with an IC ₅₀ value of 31 nM for GLS1. IPN60090 has potential anticancer and immunostimulant/immunomodulatory activity, selectively targets, binds, and inhibits human glutaminase, and can be used to study GLS1-mediated diseases.
Targets(IC50)	Glutaminase, transporter
In vitro	IPN60090 has an IC ₅₀ against GLS1 and an EC ₅₀ against A549 cell proliferation of <100 nM.[1]
In vivo	IPN-60090 (100 mg/kg; oral administration; twice daily; 30 days;) causes tumor growth inhibition. IPN-60090 is robust in vivo target engagement in a dose-dependent manner. The glutamate/glutamine ratios and the free plasma concentrations of IPN-60090 at 4 hours post-dose on both day 4 and day 28 are all decreased.[2] IPN60090 (3 mg/kg; i.v.; 10 mg/kg for p.o.) has excellent pharmacokinetic properties, with CL=4.1 mL/min/kg, t _{1/2} =1 hour, C _{max} =19 μM, F%=89%.[2]

Solubility Information

Solubility	DMSO: 27.5 mg/mL (51.64 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2 mg/mL (3.76 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	1.8779 mL	9.3893 mL	18.7786 mL
5 mM	0.3756 mL	1.8779 mL	3.7557 mL
10 mM	0.1878 mL	0.9389 mL	1.8779 mL
50 mM	0.0376 mL	0.1878 mL	0.3756 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

Maria Emilia Di Francesco, et al. Gls1 inhibitors for treating disease. WO2016004404A2.

Gong K, Huang Y, Zheng Y, et al. ZSWIM4 inhibition improves chemosensitivity in epithelial ovarian cancer cells by suppressing intracellular glycine biosynthesis. *Journal of Translational Medicine*. 2024, 22(1): 1-21.

Soth MJ, et al. Discovery of IPN60090, a Clinical Stage Selective Glutaminase-1 (GLS-1) Inhibitor with Excellent Pharmacokinetic and Physicochemical Properties. *J Med Chem*. 2020;63(21):12957-12977.

Wang D, et al. An updated patent review of glutaminase inhibitors (2019-2022). *Expert Opin Ther Pat*. 2023;33(1): 17-28.

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