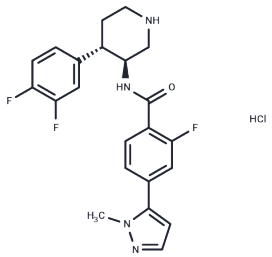
Data Sheet (Cat.No.T39899)

TargetMol

Hu7691

Chemical Properties



CAS No. : 2360523-76-6

Formula: C22H22ClF3N4O

Molecular Weight: 450.88

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	Hu7691 is an orally active, selective, and potent Akt inhibitor that targets Akt1, Akt2, and Akt3, while also inhibiting neuroblastoma cell proliferation and inducing their differentiation.
Targets(IC50)	Akt,PKA,PKC,ROCK,S6 Kinase,SGK
In vitro	Hu7691 exhibits anti-proliferative and neurogenic effects on various neuroblastoma cell lines. This includes neurite outgrowth, cell cycle arrest, and differentiation mRNA markers, further elucidating the differentiation-inducing effects of Hu7691[3].
In vivo	For a repeated dose toxicity study of Hu7691 in male and female Sprague Dawley (SD) rats over 14 consecutive days, the results indicated the following dosages: male rats received daily doses of 12.5, 50, 100, and 150 mg/kg, while female rats received daily doses of 12.5, 25, 50, and 75 mg/kg. Toxicity assessment revealed potential target organs including the spleen, thymus, and gastrointestinal tract[2].

Solubility Information

Solubility	DMSO: 80 mg/mL (177.43 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: 5 mg/mL (11.09 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	2.2179 mL	11.0894 mL	22.1789 mL
5 mM	0.4436 mL	2.2179 mL	4.4358 mL
10 mM	0.2218 mL	1.1089 mL	2.2179 mL
50 mM	0.0444 mL	0.2218 mL	0.4436 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

Junya Kawai, et al. Structure-Based Design and Synthesis of an Isozyme-Selective MTHFD2 Inhibitor with a Tricyclic Coumarin Scaffold. ACS Med Chem Lett. 2019 May 24;10(6):893-898.
Gai R, Chen C, Zhang W, Ma J, Wang X, Chi X, Li G. Safety and Toxicology Study of Hu7691, a Novel AKT Inhibitor, following Oral Administration in Rats. Toxics. 2023 Oct 26;11(11):880.
Bing S,et al. AKT inhibitor Hu7691 induces differentiation of neuroblastoma cells. Acta Pharm Sin B. 2023 Apr;13 (4):1522-1536.