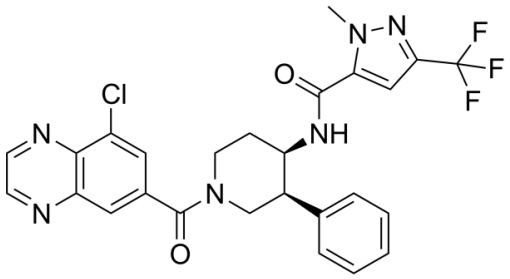
Product Data Sheet

Product Name: SPT-IN-2
Cat. No.: GC79556

Chemical Properties

Cas. No.	2035011-97-1		
Formula	$C_{26}H_{22}ClF_3N_6O_2$	M.Wt	542.94
Solubility	DMSO: 100 mg/mL (184.18 mM; Need ultrasonic)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			



Background

SPT-IN-2 is an orally active serine palmitoyltransferase (SPT) inhibitor (with an IC_{50} of 0.71 nM against human SPT2). SPT-IN-2 inhibits ceramide synthesis, suppresses cancer cell growth, and exhibits in vivo anti-tumor activity, favorable metabolic stability and cell membrane permeability in xenograft mouse models. SPT-IN-2 blocks the de novo sphingolipid synthesis pathway, significantly reducing intracellular ceramide levels and the levels of 3-ketodihydrosphingosine (3-KDS), the immediate downstream product of SPT. SPT-IN-2 can be used in research related to lung

adenocarcinoma, acute promyelocytic leukemia and breast cancer [1].

In Vivo, SPT-IN-2 (compound 5) (10 mg/kg, 30 mg/kg; oral administration by gavage; Q2D; 2 weeks) exhibits significant in vivo anti-tumor activity in a xenograft mouse model of human acute promyelocytic leukemia PL-21 cells, effectively inhibits the in vivo growth of xenograft tumors, and causes no obvious toxic side effects such as severe body weight loss in mice during the administration period[1].

In Vitro, SPT-IN-2 (compound 5) (IC_{50} 4.1 nM; 5 d) exerts potent antiproliferative effects on human acute promyelocytic leukemia PL-21 cells, with a 95% confidence interval of 3.4-4.7 nM[1].

References:
[1]. Kojima T, et al. Discovery of novel serine palmitoyltransferase inhibitors as cancer therapeutic agents. Bioorg Med Chem. 2018;26(9):2452-2465.