

Product Data Sheet

Product Name: SPT-IN-2

Cat. No.: GC79556

Chemical Properties

Cas. No. 2035011-97-1

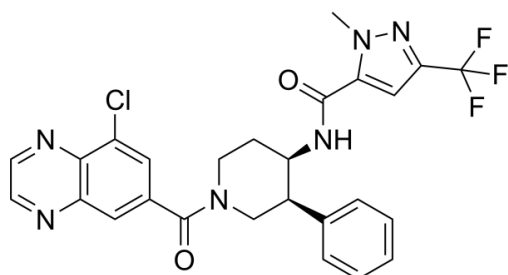
Formula $C_{26}H_{22}ClF_3N_6O_2$ M.Wt 542.94

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

Caution: Product has not been fully validated for medical applications. For research use only.

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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) (IC₅₀ 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.

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