

SPT-IN-1

Chemical Properties

CAS No. : 1933533-18-6

Formula: C₂₂H₂₄N₂O₃

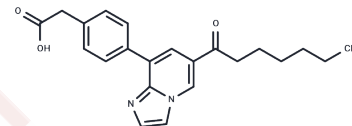
Molecular Weight: 364.44

Keep away from moisture, Keep away from direct sunlight

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	SPT-IN-1 (compound 1) is an orally active and highly potent inhibitor of serine palmitoyl transferase (SPT) with an IC ₅₀ value of 5.19 nM against human SPT1, SPT-IN-1 is utilized in metabolic disease research to explore sphingolipid biosynthesis regulation, insulin resistance mechanisms, and therapeutic strategies for type 2 diabetes and dyslipidemia.
Targets(IC50)	Others
In vitro	In cellular assays using MCF-7 cells, SPT-IN-1 exhibited a dose-dependent inhibition of sphingolipid synthesis. The compound blocked the incorporation of C14-serine into ceramide with an EC ₅₀ of 0.98 μM. This inhibition modulated cellular levels of bioactive ceramides involved in apoptosis and cell proliferation signaling [1].
In vivo	In efficacy studies involving Sprague Dawley rats fed a cholesterol/cholic acid diet, SPT-IN-1 was administered orally twice daily for 7 days at dosages of 0-60 mg/kg. The compound dose-dependently reduced plasma ceramides and triglycerides. Furthermore, the treatment resulted in an elevation of HDL (high-density lipoprotein) levels in the systemic lipid profile [4].

Solubility Information

Solubility	DMSO: 100 mg/mL (274.39 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	--

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7439 mL	13.7197 mL	27.4394 mL
5 mM	0.5488 mL	2.7439 mL	5.4879 mL
10 mM	0.2744 mL	1.372 mL	2.7439 mL
50 mM	0.0549 mL	0.2744 mL	0.5488 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

Zou B, Nagle A, Chatterjee AK, Leong SY, Tan LJ, Sim WL, Mishra P, Guntapalli P, Tully DC, Lakshminarayana SB, Lim CS, Tan YC, Abas SN, Bodenreider C, Kuhen KL, Gagaring K, Borboa R, Chang J, Li C, Hollenbeck T, Tuntland T, Zeeman AM, Kocken CH, McNamara C, Kato N, Winzeler EA, Yeung BK, Diagana TT, Smith PW, Roland J. Lead optimization of imidazopyrazines: a new class of antimalarial with activity on Plasmodium liver stages. *ACS Med Chem Lett.* 2014 Jul 6;5(8):947-50.

Chino A, et al. Novel benzimidazole derivatives as phosphodiesterase 10A (PDE10A) inhibitors with improved metabolic stability. *Bioorg Med Chem.* 2014 Jul 1;22(13):3515-26. doi: 10.1016/j.bmc.2014.04.023. Epub 2014 Apr 20.

Ducray R, et al. Novel imidazo[1,2-a]pyridine based inhibitors of the IGF-1 receptor tyrosine kinase: optimization of the aniline. *Bioorg Med Chem Lett.* 2011 Aug 15;21(16):4702-4.

Genin MJ, et al. Imidazopyridine and Pyrazolopiperidine Derivatives as Novel Inhibitors of Serine Palmitoyl Transferase. *J Med Chem.* 2016;59(12):5904-5910.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481