

Denifanstat

Chemical Properties

CAS No. : 1399177-37-7

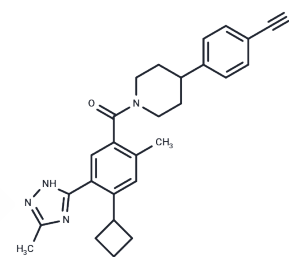
Formula: C₂₇H₂₉N₅O

Molecular Weight: 439.55

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	Denifanstat (FASN-IN-2) is a fatty acid synthase (FASN) inhibitor (IC ₅₀ =0.052 μM, EC ₅₀ =0.072 μM) with selective and oral activity. Denifanstat has been used in studies of steatohepatitis.
Targets(IC ₅₀)	Fatty Acid Synthase
In vitro	METHODS: MDA-MD-231 and MDA-MB-231-BR cells were treated with Denifanstat (1-10.3 μM) for 6-30 h. Cell migration was detected by wound healing assay. RESULTS: Cell migration was inhibited in MDA-MB-231-BR cells but not in parental MDA-MD-231 cells in a dose-dependent manner. [1]
In vivo	METHODS: To assay antitumor activity in vivo, Denifanstat (100 mg/kg, 30% PEG400) was administered by gavage to SCID mice bearing PC-3M/HOXB13KD xenografts once daily for six weeks. RESULTS: Five weeks after inoculation, HOXB13-KD mice showed significant metastasis in IVIS, which was completely alleviated by Denifanstat treatment. Denifanstat treatment significantly prolonged metastasis-free survival in both control and HOXB13-KD mice. [2]

Solubility Information

Solubility	DMSO: 262.5 mg/mL (597.2 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: 6 mg/mL (13.65 mM), Solution. <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	2.2751 mL	11.3753 mL	22.7505 mL
5 mM	0.455 mL	2.2751 mL	4.5501 mL
10 mM	0.2275 mL	1.1375 mL	2.2751 mL
50 mM	0.0455 mL	0.2275 mL	0.455 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

Serhan HA, et al. Targeting fatty acid synthase in preclinical models of TNBC brain metastases synergizes with SN-38 and impairs invasion. NPJ Breast Cancer. 2024 Jun 10;10(1):43.

Lu X, Fong K, Gritsina G, et al. HOXB13 suppresses de novo lipogenesis through HDAC3-mediated epigenetic reprogramming in prostate cancer. Nature Genetics. 2022-54(5):P670-683

Targeting FASN enhances cisplatin sensitivity via SLC7A12-mediated ferroptosis in cervical cancer

Lu X, et al. HOXB13 suppresses de novo lipogenesis through HDAC3-mediated epigenetic reprogramming in prostate cancer. Nat Genet. 2022 May;54(5):670-683.

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