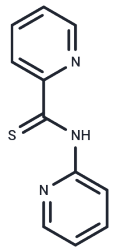
Data Sheet (Cat.No.T5211)

TargetMol

NSC 185058

Chemical Properties



CAS No. : 39122-38-8

Formula: C11H9N3S

Molecular Weight: 215.27

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	NSC 185058, an inhibitor of ATG4B (a major cysteine protease), can also attenuate autophagic activity.
Targets(IC50)	Autophagy,Cysteine Protease,ATG
In vitro	NSC185058 effectively suppressed starvation-induced autophagy in both cell types. GFP-LC3B labeled AVs were absent in starved MDA-MB468 cells when treated with NSC185058. The inhibitory effects of both NSC185058 on starvation-induced protein turnover were comparable to 3MA.
In vivo	Mice were injected at 2 24 h intervals with vehicle or NSC185058, autophagy induced by 20 h fasting. Fasting resulted in an increase of GFP-LC3B AVs compared with ad libitum fed mice. NSC185058 significantly decreased the appearance of GFP-LC3B AVs compared with fasted mice.
Cell Research	Saos-2 transiently expressing FYVE-RFP was incubated in DMEM medium supplemented with amino acids and serum (Fed) or Krebs-Heinseleit medium lacking amino acids and serum (Starved). The starved cells were incubated in the presence and absence of the NSC185058 or NSC377071 for 4 h at which time the cells were examined by fluorescence microscopy. The numbers of red "dots" per cell was quantified using ImageJ software. Taking into account basal responses, those cells with 3 or more puncta were defined as PtdIns3K active.
Animal Research	Immunodeficient nu/nu nude female mice were injected subcutaneously with 6 × 10^6 Saos-2 (GFP-LC3B), shCon-Saos-2(GFP-LC3B) or shATG4B-Saos-2(GFP-LC3B) cells. Palpable Saos-2 (GFP-LC3B) tumors developed in 7 to 10 d, at which time, the mice were divided into 2 groups and injected IP on Monday, Wednesday, and Friday with either peanut oil vehicle or NSC185058 (100 mg/kg body weight) dissolved in peanut oil. Over time, the tumor dimensions were measured using calipers and volumes calculated using the formula: (W2 × L)/2.

Solubility Information

Solubility	DMSO: 30 mg/mL (139.36 mM),Sonication is recommended. Ethanol: 2.5 mg/mL (11.61 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: 2 mg/mL (9.29 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	4.6453 mL	23.2266 mL	46.4533 mL
5 mM	0.9291 mL	4.6453 mL	9.2907 mL
10 mM	0.4645 mL	2.3227 mL	4.6453 mL
50 mM	0.0929 mL	0.4645 mL	0.9291 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

Akin D, et al. A novel ATG4B antagonist inhibits autophagy and has a negative impact on osteosarcoma tumors. Autophagy. 2014;10(11):2021-35.