Data Sheet (Cat.No.T13475)

TargetMol

β-Aminopropionitrile

Chemical Properties

CAS No. : 151-18-8

Formula: C3H6N2

Molecular Weight: 70.09

Storage: Keep away from direct sunlight,Store under nitrogen
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	β-Aminopropionitrile (3-Aminopropionitrile) is a selective inhibitor of lysyl oxidase.
Targets(IC50)	Endogenous Metabolite,Monoamine Oxidase
In vitro	β-Aminopropionitrile inhibited the invasion and migration capacities of cervical carcinoma cells and blocked the hypoxia-induced EMT morphological and marker protein changes[1].

Solubility Information

Solubility	H2O: 100 mg/mL (1426.74 mM),Sonication is recommended. DMSO: 100 mg/mL (1426.74 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: 4 mg/mL (57.07 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	14.2674 mL	71.3369 mL	142.6737 mL
5 mM	2.8535 mL	14.2674 mL	28.5347 mL
10 mM	1.4267 mL	7.1337 mL	14.2674 mL
50 mM	0.2853 mL	1.4267 mL	2.8535 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

Miana M, et al. The lysyl oxidase inhibitor β-aminopropionitrile reduces body weight gain and improves the metabolic profile in diet-induced obesity in rats. Dis Model Mech. 2015 Jun;8(6):543-51.
Zhang J, Ye F L, Ye A H, et al.Lysyl oxidase inhibits BMP9-induced osteoblastic differentiation through reducing Wnt/β-catenin via HIF-1a repression in 3T3-L1 cells.Journal of Orthopaedic Surgery and Research.2023, 18(1): 911.
Peng X, Yuan H, Chen G, et al.Investigation on the effect of ulinastatin on the apoptosis of vascular smooth muscle cells in rats with aortic dissection based on the Sirt1/FoxO3a pathway.Cellular and Molecular Biology.2023, 69(13): 96-101.
Yang X, et al. Inactivation of lysyl oxidase by β-aminopropionitrile inhibits hypoxia-induced invasion and migration of cervical cancer cells. Oncol Rep. 2013 Feb;29(2):541-8.
Deng Y, Luo H, Deng Y, et al. Lysyl Oxidase Down-Regulates The Osteoblastic Potential of BMP9 Through Inhibiting HIF-1α/Wnt/β-Catenin Axis in Mesenchymal Stem Cells[J]. 2021