Data Sheet (Cat.No.T72103)

TargetMol

β-Aminopropionitrile hydrochloride

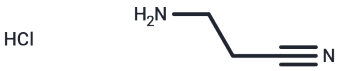
Chemical Properties

CAS No. : 646-03-7

Formula: C3H7ClN2

Molecular Weight: 106.55

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	β-Aminopropionitrile hydrochloride is a selective, orally available, irreversible inhibitor of lysyl oxidase (LOX) that reduces metastatic seeding potential in MDA-MB-231 breast cancer cells.
Targets(IC50)	Endogenous Metabolite,Lipoxygenase,Monoamine Oxidase
In vitro	In an in vitro model of insulin resistance, β-Aminopropionitrile hydrochloride can restore the expression of GLUT4 and adiponectin to normal levels and improve Vitis vinifera sugar uptake [1]. β-Aminopropionitrile hydrochloride (500 μM, 72 hours) can block hypoxia-induced epithelial-mesenchymal transition (EMT) morphological changes and marker protein alterations in cervical squamous cell carcinoma cells, while also inhibiting their invasion and migration capabilities (in vitro experiment) [2].
In vivo	β-Aminopropionitrile hydrochloride, at a dose of 100 mg/kg/day administered orally for 6 weeks, reduced weight gain and improved metabolic profiles in diet-induced obese rats [1]. β-Aminopropionitrile hydrochloride, at a dose of 1 g/kg/day administered orally for 4 weeks, induced thoracic aortic dissection in C57BL/6 mice [3].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	9.3853 mL	46.9263 mL	93.8527 mL
5 mM	1.8771 mL	9.3853 mL	18.7705 mL
10 mM	0.9385 mL	4.6926 mL	9.3853 mL
50 mM	0.1877 mL	0.9385 mL	1.8771 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.
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.
Ren W, et al. β-Aminopropionitrile monofumarate induces thoracic aortic dissection in C57BL/6 mice. Sci Rep. 2016 Jun 22;6:28149.