

Neamine tetrahydrochloride

Chemical Properties

CAS No. : 15446-43-2

Formula: C₁₂H₃₀Cl₄N₄O₆

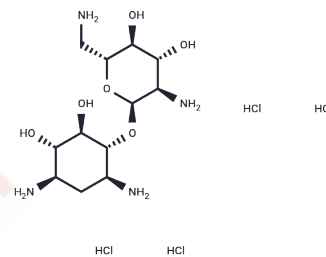
Molecular Weight: 468.2

Storage:

Store at low temperature, Keep away from moisture,
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	Neamine tetrahydrochloride is a broad-spectrum aminoglycoside antibiotic with antibacterial, antitumor and neuroprotective activities, inhibits the growth of pancreatic cancer cells, and inhibits the proliferation of oral cancer cells. Neamine tetrahydrochloride inhibits xenogeneic human tumor growth and angiogenesis in athymic mice and can be used to study oral and pancreatic cancer.
Targets(IC50)	Antibacterial, Antibiotic
In vitro	AsPC-1 cells were seeded into the 96-well plate and treated with 1 µg/mL ANG in the presence of various concentrations of neamine (0.625–25 µmol/L) for 48 h. Neamine inhibited ANG-mediated AsPC-1 cell proliferation in a dose-dependent manner in the range of 0.625–25 µmol/L, and 0.625 µmol/L neamine was found to inhibit the proliferative activity of ANG by 66%. Neamine at 1.25 µmol/L suppressed ANG-induced cell proliferation by 79.5% and cells couldn't proliferate in the presence of 5 µmol/L neamine at all. [1]
In vivo	AsPC-1 cells (5×10 ⁶) suspended in 200 µL PBS were injected subcutaneously into the right flanks of male Balb/c nude mice. When the average of tumor volume reached appropriately 200 mm ³ , mice were randomly divided into three groups (n=6 in each group) and subcutaneously injected with saline, 5-FU (25 mg/kg, q.o.d ×6), neamine (30 mg/kg, q.d ×12) and neamine (60 mg/kg, q.d. ×12). Neamine suppressed the tumor size when compared to saline group. The tumor weight was significantly decreased in the neamine-treated mice. [1]

Solubility Information

Solubility	PBS (pH 7.2): 10 mg/mL (21.36 mM), Sonication is recommended. H ₂ O: 10 mg/mL (21.36 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1358 mL	10.6792 mL	21.3584 mL
5 mM	0.4272 mL	2.1358 mL	4.2717 mL
10 mM	0.2136 mL	1.0679 mL	2.1358 mL
50 mM	0.0427 mL	0.2136 mL	0.4272 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

Liu YP, et al. Neamine inhibits growth of pancreatic cancer cells in vitro and in vivo. J Huazhong Univ Sci Technolog Med Sci. 2016 Feb;36(1):82-87.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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