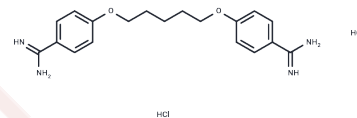


Pentamidine dihydrochloride

Chemical Properties

CAS No. :	50357-45-4
Formula:	C ₁₉ H ₂₆ Cl ₂ N ₄ O ₂
Molecular Weight:	413.34
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	Pentamidine dihydrochloride (MP-601205 dihydrochloride) is an aromatic diamidine agent effective against various microorganisms, including protozoa (<i>Trypanosoma brucei</i> , <i>Leishmania</i> spp., and <i>Babesia</i> spp.) and fungi (<i>Pneumocystis jirovecii</i>). It is a potent and selective inhibitor of protein tyrosine phosphatases and phosphatase of regenerating liver. Pentamidine dihydrochloride inhibits the parasite <i>Leishmania infantum</i> with an IC ₅₀ of 2.5 μM.
Targets(IC50)	Antibacterial, Antibiotic, Parasite, Antifungal, Phosphatase
In vitro	Pentamidine at its therapeutic doses inhibited recombinant PRL phosphatases in vitro and inactivated ectopically expressed PRLs in NIH3T3 transfectants with an effective duration more than 24 h after a pulse cell treatment[3].
In vivo	Pentamidine at a tolerable dose markedly inhibited the growth of WM9 human melanoma tumors in nude mice coincident with the induction of tumor cell necrosis and is capable of inactivating ectopically expressed PRL-2 in the cancer cells[3].

Solubility Information

Solubility	DMSO: 4.14 mg/mL (10.02 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	2.4193 mL	12.0966 mL	24.1932 mL
5 mM	0.4839 mL	2.4193 mL	4.8386 mL
10 mM	0.2419 mL	1.2097 mL	2.4193 mL
50 mM	0.0484 mL	0.2419 mL	0.4839 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

Nguewa, P.A., et al., Pentamidine is an antiparasitic and apoptotic drug that selectively modifies ubiquitin. *Chem Biodivers*, 2005. 2(10): p. 1387-400.

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Pathak MK, et al. Pentamidine is an inhibitor of PRL phosphatases with anticancer activity. *Mol Cancer Ther*. 2002 Dec;1(14):1255-64.

Sands M, et al. Pentamidine: a review. *Rev Infect Dis*. 1985 Sep-Oct;7(5):625-34.

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