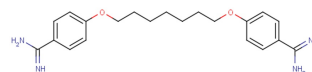


Heptamidine

Chemical Properties

CAS No.:	94345-47-8
Formula:	C ₂₁ H ₂₈ N ₄ O ₂
Molecular Weight:	368.47
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	Heptamidine is an effective Pentamidine-related inhibitor of the calcium-binding protein S100B (Kd: 6.9 μ M). It selectively kills melanoma cells with S100B over those without S100B. It is a useful tool for the investigation of Myotonic dystrophy.
Targets(IC ₅₀)	calcium-binding protein S100B: (kd)6.9 μ M
In vitro	Heptamidine rescues the mis-splicing of minigene reporters in a HeLa cell DM1 model (EC ₅₀ : 15 μ M). When compares to Propamidine and Pentamidine, Heptamidine (20 μ M) does not reduce CUG levels obviously. It shows cytotoxic at concentrations above 17.5 μ M in HeLa cells expressing 960 CUG repeats [2].
In vivo	Heptamidine (i.p.; 20 or 30 mg/kg; 7 days) induces a dose-dependent reduction of exon 7a inclusion in HSALR mice. When at 20 mg/kg dose, returning to wild type levels (6 \pm 1%), the myotonia is reduced from grade 3 to grade 1 (occasional myotonic discharge) or grade 0 at both 20 or 30 mg/kg [2].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.714 mL	13.57 mL	27.139 mL
5 mM	0.543 mL	2.714 mL	5.428 mL
10 mM	0.271 mL	1.357 mL	2.714 mL
50 mM	0.054 mL	0.271 mL	0.543 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

- McKnight LE, et al. Structure-Based Discovery of a Novel Pentamidine-Related Inhibitor of the Calcium-Binding Protein S100B. ACS Med Chem Lett. 2012 Dec 13;3(12):975-979. Epub 2012 Sep 25.
- Coonrod LA, et al. Reducing levels of toxic RNA with small molecules.ACS Chem Biol. 2013 Nov 15;8(11):2528-37.

Inhibitors · Natural Compounds · Compound Libraries

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