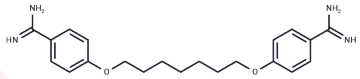
Data Sheet (Cat.No.T11553L)

TargetMol

Heptamidine

Chemical Properties



CAS No. : 94345-47-8

Formula: C21H28N4O2

Molecular Weight: 368.47

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	Heptamidine is an effective Pentamidine-related inhibitor of the calcium-binding protein S100B (Kd: 6.9 μM). It selectively kills melanoma cells with S100B over those without S100B. It is a useful tool for the investigation of Myotonic dystrophy.
Targets(IC50)	Others
In vitro	Heptamidine is a Pentamidine-S100B complex with two pentamidine molecules binding per monomer of S100B, acting as an inhibitor for S100B[1]. It rescues mis-splicing of minigene reporters in a HeLa cell DM1 model with an EC50 value of 15 μM. Compared to Propamidine and Pentamidine, Heptamidine (20 μM) does not significantly reduce CUG levels. It exhibits cytotoxicity at concentrations above 17.5 μM in HeLa cells expressing 960 CUG repeats[2].
In vivo	Heptamidine (intraperitoneal injection; 20 or 30 mg/kg; 7 days) induces a dose-dependent reduction of exon 7a inclusion in HSALR mice, returning to wild-type levels (6±1%) at a 20 mg/kg dose. Myotonia is reduced from grade 3 to grade 1 (occasional myotonic discharge) or grade 0 at both 20 and 30 mg/kg [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7139 mL	13.5696 mL	27.1393 mL
5 mM	0.5428 mL	2.7139 mL	5.4279 mL
10 mM	0.2714 mL	1.357 mL	2.7139 mL
50 mM	0.0543 mL	0.2714 mL	0.5428 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

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.

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