
Product Data Sheet

Product Name: Heptamidine

Cat. No.: GC60188

Chemical Properties

Cas. No. 94345-47-8

SMILES N=C(C1=CC=C(OCCCCCCCOC2=CC=C(C(N)=N)C=C2)C=C1)NFormula $C_{21}H_{28}N_4O_2$ M.Wt 368.47

Solubility Storage

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure **Background**

Heptamidine (SBI4211) is a potent Pentamidine-related inhibitor of the calcium-binding protein S100B ($K_d=6.9 \mu M$), selectively kills melanoma cells with S100B over those without S100B[1]. Heptamidine is a useful tool for the investigation of Myotonic dystrophy (DM)[2].

Heptamidine is a Pentamidine-S100B complex, two molecules of pentamidine bind per monomer of S100B, which performs to be an inhibitor for S100B[1]. Heptamidine (20 μM) does not decrease CUG levels significantly when compares to Propamidine and Pentamidine, and exhibits cytotoxic at concentrations above 17.5 μM in HeLa cells expressing 960 CUG repeats[2]. Heptamidine rescues mis-splicing of minigene reporters in a HeLa cell DM1 model with an EC50 value of 15 μM [2].

Heptamidine (intraperitoneal injection; 20 or 30 mg/kg; 7 days) causes a dose-dependent reduction of exon 7a inclusion in HSALR mice, returning to wild type levels ($6 \pm 1\%$) when at 20 mg/kg dose, the myotonia is reduced from grade 3 to grade 1 (occasional myotonic discharge) or grade 0 at both 20 or 30 mg/kg[2]. Animal Model: Homozygous HSALR transgenic mice in line 20b (FVB inbred background) with a

Caution: Product has not been fully validated for medical applications. For research use only.

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Myotonic dystrophy (DM) mouse model[2]

[1]. 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. [2]. 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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