Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Pentamidine (dihydrochloride)

Catalog No: tcsc2635

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
50357-45-4

Formula:
$C_{19}H_{26}Cl_2N_4O_2$

Pathway:
Anti-infection

Target:
Parasite

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Alternative Names:
MP601205 dihydrochloride

Observed Molecular Weight:
413.34

Product Description

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Pentamidine Dihydrochloride(MP601205 dihydrochloride) is an antimicrobial agent.

Target: Antiparasitic

Pentamidine Dihydrochloride has a potent in vitro antiprotozoal activity. Pentamidine displays cytotoxic activity against L. infantum promastigotes with IC50 of 2.5 μM. 2.5 μM Pentamidine induces early programmed cell death in 49.6% of L. infantum promastigotes. 2.5 μM Pentamidine induces a notorious decrease in promastigotes in both G1 and S phases relative to the control-untreated samples (G1:77.0 vs 15.0%; S:11.0 vs 2.4% for control- and pentamidine-treated promastigotes, resp). Pentamidine is able to bind with calf-thymus DNA (CT-DNA) and induces conformational changes in the DNA double helix. Pentamidine also binds with ubiquitin to modifiy the β-cluster of ubiquitin [1]. Pentamidine is an inhibitor of phosphatase of regenerating liver (PRLs). 1 μg/mL of Pentamidine complete inhibits the activity of recombinant PTP1B in dephosphorylating a phos-photyrosine peptide. 10 μg/mL of Pentamidine completely inhibits the activities of recombinant PRL-1, PRL-2 and PRL-3 in dephosphorylating a phosphotyrosine peptide substrate. Incubation with Pentamidine (1 μg/mL) for 48 h reduces the activity of intracellular PRL phosphatases in transfected NIH3T3 cells by more than 85%. 10 μg/mL Pentamidine completely inhibits the growth of melanoma cell line (WM9), prostate carcinoma cell line (DU145 and C4-2), ovarian carcinoma cell line (Hey), colon carcinoma cell line (WM480), and lung carcinoma cell line (A549) which all express endogenous PRLs [2].