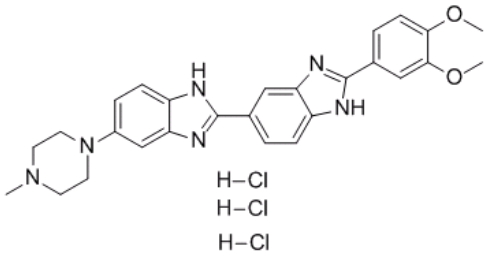
Product Data Sheet

Product Name: DMA trihydrochloride
Cat. No.: GC34098

Chemical Properties

Cas. No.	2095832-33-8		
SMILES	CN1CCN(C2=CC=C3C(N=C(C4=CC=C5C(N=C(C6=CC=C(OC)C(OC)=C6)N5)=C4)N3)=C2)CC1.[H]Cl.[H]Cl.[H]Cl		
Formula	$C_{27}H_{31}Cl_3N_6O_2$	M.Wt	577.93
Solubility	Water : 15.9 mg/mL (27.51 mM)	Storage	4°C, protect from light
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



Protocol

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Cell experiment: Various human tumor cells (U87, HeLa and MCF7) are maintained as monolayer at 37°C in 5% CO2 using DMEM medium. Approximately 3000-8000 cells/well are seeded in 96-well plates containing 200 μL of medium and incubated for 24 h. The culture medium is replaced by fresh medium containing 1, 10, 50, 100 μM of DMA (6c) and incubated for 24, 48 and 72 h. The cell viability is determined by the MTT assay. The light absorbance is measured using a microplate reader[1].

References:

[1]. Singh M, et al. Synthesis and biological activity of novel inhibitors of topoisomerase I: 2-aryl-substituted 2-bis-1H-benzimidazoles. Eur J Med Chem. 2011 Feb;46(2):659-69.

Background

DMA trihydrochloride is a fluorescent compound (λex=340 nm, λem=478 nm).

The newly synthesized bisbenzimidazole derivatives DMA (6c) is evaluated for their cytotoxicity against human tumor cell lines, which are cervix carcinoma cell line (HeLa), breast carcinoma cell line (MCF7) and brain glioma cell line (U87) in comparison to Hoechst. In case of MCF7, the IC50 is observed at 5.3 μM for DMA. The IC50 determined in the case of HeLa is 3.4 μM for DMA[1].

[1]. Singh M, et al. Synthesis and biological activity of novel inhibitors of topoisomerase I: 2-aryl-substituted 2-bis-1H-benzimidazoles. Eur J Med Chem. 2011 Feb;46(2):659-69.

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