
Product Data Sheet

Product Name: PPlase-Parvulin Inhibitor

Cat. No.: GC12953

Chemical Properties

Cas. No. 64005-90-9

Chemical Name 1,3,6,8-tetrahydro-1,3,6,8-tetraoxo-benzo[*lmn*][3,8]phenanthroline-2,7-diacetic acid, 2,7-diethyl ester

SMILES O=C1N(CC(OCC)=O)C(C2=CC=C(C3=C4C=CC1=C23)C(N(CC(OCC)=O)C4=O)=O)=O

Formula $C_{22}H_{18}N_2O_8$

M.Wt 438.4

Solubility $\leq 10\text{mg/ml}$ in DMSO; 10mg/ml in dimethyl formamide

Storage Store at -20°C

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

Targets: Pin1 and Pin4

IC₅₀: 1.5 and 1.0 μM for Pin1 and Pin4, respectively.

PPlase-Parvulin Inhibitor is a cell-permeable inhibitor of the PPlases Pin1 and Pin4, with the IC₅₀ values of 1.5 and 1.0 μM , respectively [1].

In Vitro: PPlase-Parvulin Inhibitor could significantly inhibit a number of cancer cell lines such as HSC2, HSC4, HCT116, SKOV3 that overexpressed Pin1 and Pin4, with the IC₅₀ values ranging from 2-5 μM , while cancer cell lines with a low expression of Pin1 such as HLE and HepG2 were less sensitive to PPlase-Parvulin Inhibitor [1]. Besides, 0.5 $\mu\text{g/ml}$ PPlase-Parvulin Inhibitor could reduce MCF10A-Myc cells colony formation which was induced by Pin1 overexpression [2]. Furthermore, in NOP6 mouse mammary tumor cells, 1.5 μM PPlase-Parvulin Inhibitor could significantly impair mammosphere formation efficiency (MFE) at the M2 level [3].

In Vivo: No data available recently.

Clinical trial: No data available recently.

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

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References:

[1] Uchida T, Takamiya M, Takahashi M, et al. Pin1 and Par14 Peptidyl Prolyl Isomerase Inhibitors Block Cell Proliferation[J]. Chemistry & Biology, 2003, 10(1):15.

[2] Farrell A S, Pelz C, Wang X, et al. Pin1 Regulates the Dynamics of c-Myc DNA Binding To Facilitate Target Gene Regulation and Oncogenesis[J]. Molecular and Cellular Biology, 2013, 33(15): 2930-2949.

[3] Rustighi A, Zannini A, Tiberi L, et al. Prolyl-isomerase Pin1 controls normal and cancer stem cells of the breast[J]. Embo Molecular Medicine, 2014, 6(1): 99-119.

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