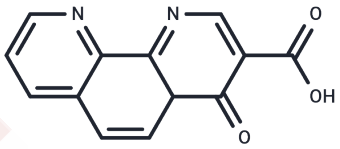
Data Sheet (Cat.No.T21653)

TargetMol

1,4-DPCA

Chemical Properties



CAS No. : 331830-20-7

Formula: C13H8N2O3

Molecular Weight: 240.21

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	1,4-DPCA is an inhibitor of prolyl-hydroxylase with an IC50 of 2.4 μM for collagen hydroxylation in human foreskin fibroblasts and 60 μM for factor inhibiting HIF (FIH).
Targets(IC50)	HIF/HIF Prolyl-Hydroxylase
In vitro	1,4-DPCA significantly reduces the colony sizes and invasive branches of T4-2 (10 μM) and ZR-75-1 cells (20 μM). 1,4-DPCA inhibits the proliferation in T4-2, ZR-75-1, MDA-MB-231 cells, and MDA-MB-157[1]. In mouse B6 cells, 1,4-DPCA specifically increases the expression of proangiogenic target genes including Hmox1 and Vegfa, and proglycolytic targets including Ldh-a, Pdk1, Glut1, and Pgk1[2].
In vivo	In mice, 1,4-DPCA effectively inhibits collagen deposition within and on the outer surface of the disc, and limits connective tissue ingrowth. 1,4-DPCA suppresses connective tissue ingrowth in porous porous poly (lactic-co-glycolic acid) discs implanted in the peritoneal cavity[3].

Solubility Information

Solubility	DMSO: 1.54 mg/mL (6.41 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 0.15 mg/mL (0.62 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.163 mL	20.8151 mL	41.6302 mL
5 mM	0.8326 mL	4.163 mL	8.326 mL
10 mM	0.4163 mL	2.0815 mL	4.163 mL
50 mM	0.0833 mL	0.4163 mL	0.8326 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

Gaofeng Xiong, et al. Prolyl-4-hydroxylase α subunit 2 promotes breast cancer progression and metastasis by regulating collagen deposition. BMC Cancer. 2014 Jan 2;14:1.
Yong Zhang, et al. Drug-induced regeneration in adult mice. Sci Transl Med. 2015 Jun 3;7(290):290ra92.
Ryan J Love, et al. Transient inhibition of connective tissue infiltration and collagen deposition into porous poly (lactic-co-glycolic acid) discs. J Biomed Mater Res A. 2013 Dec;101(12):3599-606.