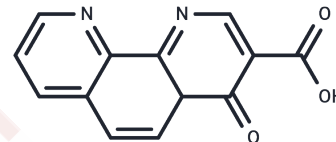


1,4-DPCA

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 331830-20-7 |
| Formula: | C ₁₃ H ₈ N ₂ O ₃ |
| 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 IC ₅₀ of 2.4 μM for collagen hydroxylation in human foreskin fibroblasts and 60 μM for factor inhibiting HIF (FIH). |
| Targets(IC ₅₀) | 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 Pkg1[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: 2.78 mg/mL (11.57 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|--|

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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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