



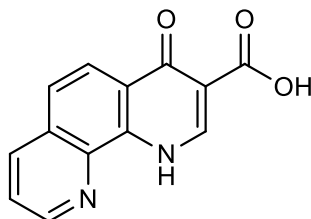
Catalog # 10-2956

1,4-DPCA

331830-20-7

1,4-Dihydrophenanthroline-4-one-3-carboxylic acid

Lot # X101613



Potent inhibitor of prolyl 4-hydroxylase ($IC_{50}=2-4 \mu M$)¹. Inhibits collagen deposition via inhibition of collagen proline hydroxylation^{2,3}. Subcutaneous injection of a 1,4-DPCA containing hydrogel into Swiss Webster mice that do not show a regenerative phenotype increased expression of HIF1 α over 5 days. Multiple injections led to regenerative wound healing after ear hole punch injury⁴.

- 1) Franklin *et al.* (2001), *Inhibition of prolyl 4-hydroxylase in vitro and in vivo by members of a novel series of phenanthrolineones*; Biochem. J., **353** 333
- 2) Xiong *et al.* (2014), *Prolyl-4-hydroxylase α subunit 2 promotes breast cancer progression and metastasis by regulating collagen deposition*; BMC Cancer, **14** 1
- 3) Love and Jones *et al.* (2013), *Transient inhibition of connective tissue infiltration and collagen deposition into porous poly(lactic-co-glycolic acid) discs*; J. Biomed. Mater. Res., **101** 3599
- 4) Zhang *et al.* (2015), *Drug induced regeneration in adult mice*; Sci. Transl. Med., **7** 290ra92

PHYSICAL DATA

Molecular Weight:	240.22
Molecular Formula:	C ₁₃ H ₈ N ₂ O ₃
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 15 mg/ml with warming)
Physical Description:	Tan solid
Storage and Stability:	Store as supplied desiccated at room temperature for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 2 months.

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