

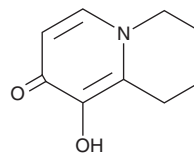
# PRODUCT INFORMATION



## CP94

Item No. 33323

**CAS Registry No.:** 115900-75-9  
**Formal Name:** 1,2-diethyl-3-hydroxy-4(1H)-pyridinone  
**Synonyms:** CGP 46700, 1,2-Diethyl-3-hydroxypyridin-4-one, EL1Net, 1,2-diethyl HP  
**MF:** C<sub>9</sub>H<sub>13</sub>NO<sub>2</sub>  
**FW:** 167.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 220, 287 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

CP94 is supplied as a solid. A stock solution may be made by dissolving the CP94 in the solvent of choice, which should be purged with an inert gas. CP94 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of CP94 in DMSO is approximately 15 mg/ml and approximately 30 mg/ml in ethanol and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of CP94 can be prepared by directly dissolving the solid in aqueous buffers. The solubility of CP94 in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

CP94 is an iron chelator.<sup>1</sup> It enhances protoporphyrin IX photobleaching and decreases in the viability of A431 squamous epithelial carcinoma cells when used at a concentration of 150 μM in combination with photodynamic therapy (PDT) mediated by the protoporphyrin IX precursors aminolevulinic acid (ALA), methyl aminolevulinate (MAL), or hexylaminolevulinate (HAL; Item No. 23949).<sup>2</sup> CP94 (2 mg/ml in the drinking water) decreases hepatic total non-heme and ferritin-stored iron levels, as well as increases hepatic protoporphyrin levels, in mice.<sup>3</sup> It also reduces ferrocene-induced increases in rat brain iron levels when administered at a dose of 100 mg/kg.<sup>4</sup>

### References

1. Dobbin, P.S., Hider, R.C., Hall, A.D., *et al.* Synthesis, physicochemical properties, and biological evaluation of N-substituted 2-alkyl-3-hydroxy-4(1H)-pyridinones: Orally active iron chelators with clinical potential. *J. Med. Chem.* **36(17)**, 2448-2458 (1993).
2. Blake, E., Allen, J., and Curnow, A. The effects of protoporphyrin IX-induced photodynamic therapy with and without iron chelation on human squamous carcinoma cells cultured under normoxic, hypoxic and hyperoxic conditions. *Photodiagnosis Photodyn. Ther.* **10(4)**, 575-582 (2013).
3. Smith, A.G., Clothier, B., Francis, J.E., *et al.* Protoporphyrin induced by the orally active iron chelator 1,2-diethyl-3-hydroxypyridin-4-one in C57BL/10ScSn mice. *Blood* **89(3)**, 1045-1051 (1997).
4. Ward, R.J., Dexter, D., Florence, A., *et al.* Brain iron in the ferrocene-loaded rat: its chelation and influence on dopamine metabolism. *Biochem. Pharmacol.* **49(12)**, 1821-1826 (1995).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/11/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM