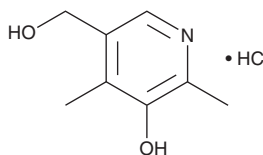


# PRODUCT INFORMATION

## 4-deoxy Pyridoxine (hydrochloride)

Item No. 21863

**CAS Registry No.:** 148-51-6  
**Formal Name:** 5-hydroxy-4,6-dimethyl-3-pyridinemethanol, monohydrochloride  
**Synonyms:** 4-Deoxypyridoxine, DOP, 4-DPD  
**MF:**  $C_8H_{11}NO_2 \cdot HCl$   
**FW:** 189.6  
**Purity:**  $\geq 98\%$   
**UV/Vis.:**  $\lambda_{max}$ : 286 nm  
**Supplied as:** A crystalline solid  
**Storage:**  $-20^\circ C$   
**Stability:**  $\geq 2$  years



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

### Laboratory Procedures

4-deoxy Pyridoxine (DOP) (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the DOP (hydrochloride) in the solvent of choice. DOP (hydrochloride) is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 10 mg/ml.

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 DOP (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of DOP (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

DOP is a vitamin B<sub>6</sub> antimetabolite with diverse biological activities.<sup>1-5</sup> It inhibits transport of pyridoxine (Item No. 20706), pyridoxal, and pyridoxamine in and reduces growth of *S. carlsbergensis* cells.<sup>1</sup> DOP inhibits sphingosine-1-phosphate (S1P) lyase and reduces cyclic stretch-induced apoptosis in alveolar epithelial MLE-12 cells.<sup>2</sup> DOP (5 mg, i.p.) reduces lysyl oxidase activity by 26% and reduces collagen and elastin crosslinking, resulting in limb abnormalities in chick embryos.<sup>3</sup> It decreases latency to first seizure in mice (ED<sub>50</sub> = 1 mmol/kg) and increases the occurrence and duration of myoclonic responses in baboons with photosensitive epilepsy.<sup>4</sup> DOP reduces TNF- $\alpha$  and IL-6 production in mice infected with *T. spiralis*.<sup>5</sup>

### References

1. Shane, B. and Snell, E.E. *J. Biol. Chem.* **251**(4), 1042-1051 (1976).
2. Suryadevara, V., Fu, P., Ebenezer, D.L., et al. *Int. J. Mol. Sci.* **19**(1), pii: E114 (2018).
3. Bird, T.A. and Levene, C.I. *Biochem. J.* **210**(3), 633-638 (1983).
4. Horton, R.W. and Meldrum, B.S. *Br. J. Pharmacol.* **49**(1), 52-63 (1973).
5. Frydas, S., Karagouni, E., Dotsika, E., et al. *Immunol. Lett.* **49**(3), 179-184 (1996).

#### 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, 03/27/2020

#### 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