

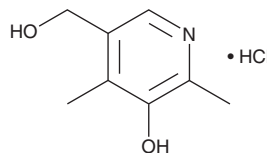
PRODUCT INFORMATION



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: C₈H₁₁NO₂ • HCl
FW: 189.6
Purity: ≥98%
UV/Vis.: λ_{max}: 286 nm
Supplied as: A crystalline 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

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, which should be purged with an inert gas. DOP (hydrochloride) is soluble in the organic solvent DMSO 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 B₆ antimetabolite with diverse biological activities.¹⁻⁵ It inhibits transport of pyridoxine (Item No. 20706), pyridoxal, and pyridoxamine in and reduces growth of *S. carlsbergensis* cells.¹ DOP inhibits sphingosine-1-phosphate (S1P) lyase and reduces cyclic stretch-induced apoptosis in alveolar epithelial MLE-12 cells.² DOP (5 mg, i.p.) reduces lysyl oxidase activity by 26% and reduces collagen and elastin crosslinking, resulting in limb abnormalities in chick embryos.³ It decreases latency to first seizure in mice (ED₅₀ = 1 mmol/kg) and increases the occurrence and duration of myoclonic responses in baboons with photosensitive epilepsy.⁴ DOP reduces TNF-α and IL-6 production in mice infected with *T. spiralis*.⁵

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.

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