

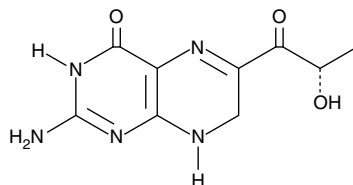
Product Information



L-Sepiapterin

Item No. 81650

CAS Registry No.: 17094-01-8
Formal Name: 2-amino-7,8-dihydro-6-(2S-hydroxy-1-oxopropyl)-4(1H)-pteridinone
MF: C₉H₁₁N₅O₃
FW: 237.2
Purity: ≥99%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 215, 268, 417 nm



Laboratory Procedures

For long term storage, we suggest that L-sepiapterin be stored as supplied in crystalline form at -20°C. It should be stable for at least two years.

L-sepiapterin is supplied as a crystalline solid. A stock solution may be made by dissolving the L-sepiapterin in an organic solvent purged with an inert gas. L-sepiapterin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of L-sepiapterin in these solvents is approximately 1.6 mg/ml in ethanol and approximately 33 mg/ml in DMSO 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 L-sepiapterin can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of L-sepiapterin in PBS, pH 7.2, is approximately 1.5 m/ml. We do not recommend storing the aqueous solution for more than one day.

L-Sepiapterin serves as a substrate for BH₄ synthesis *via* the pterin salvage pathway.¹ It inhibits rat liver GTP cyclohydrolase with an IC₅₀ value of approximately 25 μM.² It can be used to circumvent the inhibition of pterin biosynthesis by 2,4-diamino-6-hydroxy pyrimidine.³

References

1. Mayer, B. and Werner, E.R. In search of a function for tetrahydrobiopterin in the biosynthesis of nitric oxide. *Naunyn Schmiedebergs Arch. Pharmacol.* **351**, 453-463 (1995).
2. Shen, R., Alam, A., and Zhang, Y. Inhibition of GTP cyclohydrolase I by pterins. *Biochim. Biophys. Acta* **965**, 9-15 (1988).
3. Gross, S.S. and Levi, R. Tetrahydrobiopterin synthesis. An absolute requirement for cytokine-induced nitric oxide generation by vascular smooth muscle. *J. Biol. Chem.* **267**, 25722-25729 (1992).

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