

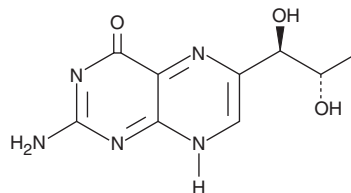
Product Information



L-Biopterin

Catalog No. 10007662

CAS Registry No.: 22150-76-1
Formal Name: 2-amino-6-[(1R,2S)-1,2-dihydroxypropyl]-4(1H)-pteridinone
Synonyms: L-erythro-Biopterin, NSC 339699
MF: C₉H₁₁N₅O₃
FW: 237.2
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that L-biopterin be stored as supplied at -20°C. It will be stable for at least two years.

L-Biopterin is supplied as a crystalline solid. A stock solution may be made by dissolving the L-biopterin in an organic solvent purged with an inert gas. L-Biopterin is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of L-biopterin in these solvents is approximately 1 mg/ml in DMSO and approximately 0.3 mg/ml in DMF.

L-Biopterin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, L-biopterin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. L-Biopterin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

L-Biopterin is the oxidized form of tetrahydro-L-biopterin (BH₄), a nitric oxide synthase (NOS) cofactor. L-Biopterin can be reduced to BH₄ via thioredoxin reductase followed by dihydropteridine reductase or reduced glutathione. It is extremely toxic to human melanocytes in culture (IC₅₀ = 0.2 μM after 48 hrs).¹ L-Biopterin is rarely found under physiological conditions except in the epidermis of patients with the depigmentation disorder Vitiligo.²

References

1. Moore, J., Wood, J.M., and Schallreuter, K.U. Evidence for specific complex formation between α-melanocyte stimulating hormone and 6(R)-L-erythro-5,6,7,8-tetrahydrobiopterin using near infrared fourier transform raman spectroscopy. *Biochemistry* **38**, 15317-15324 (1999).
2. Schallreuter, K.U., Büttner, G., Pittelkow, M.R., *et al.* Cytotoxicity of 6-biopterin to human melanocytes. *Biochem. Biophys. Res. Commun.* **204**(1), 43-48 (1994).

Related Products

tetrahydro-L-Biopterin (dihydrochloride) - Cat. No. 81880 • 7,8-dihydro-L-Biopterin - Cat. No. 81882

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy located on our website and in our catalog**.

Copyright Cayman Chemical Company, 11/16/2007

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com