

PRODUCT INFORMATION

(6S)-5,6,7,8-tetrahydro-L-Biopterin (sulfate)

Item No. 34671

CAS Registry No.: 109784-74-9

Formal Name: [6S-[6R*(1S*,2R*)]]-2-amino-6-(1,2-dihydroxypropyl)-5,6,7,8-tetrahydro-4(1H)-pteridinone, sulfate

Synonym: (6S)-BH₄

MF: C₉H₁₅N₅O₃ • XH₂SO₄

FW: 241.2

Purity: ≥85%

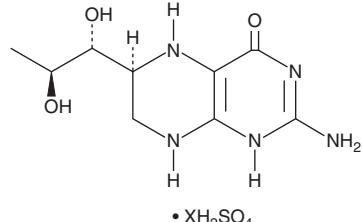
UV/Vis.: λ_{max}: 219, 267 nm

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

(6S)-5,6,7,8-tetrahydro-L-Biopterin (sulfate) is supplied as a solid. A stock solution may be made by dissolving the (6S)-5,6,7,8-tetrahydro-L-biopterin (sulfate) in water. The solubility of (6S)-5,6,7,8-tetrahydro-L-biopterin (sulfate) in water is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(6S)-5,6,7,8-tetrahydro-L-Biopterin is a diastereomer of (6R)-5,6,7,8-tetrahydro-L-biopterin (Item No. 81880), a cofactor for tyrosine, tryptophan, and phenylalanine hydroxylases and nitric oxide synthase (NOS).¹⁻⁴

References

- Ishii, A., Hagihara, M., Matsuura, S., et al. Effect of (6R)- and (6S)-tetrahydrobiopterin on L-3,4-dihydroxyphenylalanine (DOPA) formation in NRK fibroblasts transfected with human tyrosine hydroxylase type 2 cDNA. *Neurochem. Int.* **17**(4), 625-632 (1990).
- Kappock, T.J. and Caradonna, J.P. Pterin-dependent amino acid hydroxylases. *Chem. Rev.* **96**(7), 2659-2756 (1996).
- Mayer, B. and Werner, E.R. In search of a function for tetrahydrobiopterin in the biosynthesis of nitric oxide. *N.-S. Arch. Pharmacol.* **351**(5), 453-463 (1995).
- Kraft, V.A.N., Bezjian, C.T., Pfeiffer, S., et al. GTP cyclohydrolase 1/tetrahydrobiopterin counteract ferroptosis through lipid remodeling. *ACS Cent. Sci.* **6**(1), 41-53 (2020).

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.