

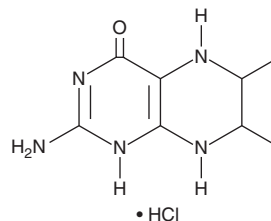
PRODUCT INFORMATION



6,7-dimethyl-5,6,7,8-Tetrahydropterin (hydrochloride)

Item No. 21050

CAS Registry No.: 945-43-7
Formal Name: 2-amino-5,6,7,8-tetrahydro-6,7-dimethyl-4(3H)-pteridinone, monohydrochloride
Synonyms: DMPH₄, NSC 87950
MF: C₈H₁₃N₅O • HCl
FW: 231.7
Purity: ≥98%
UV/Vis.: λ_{max}: 218, 266 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

6,7-dimethyl-5,6,7,8-Tetrahydropterin (hydrochloride) is supplied as a crystalline solid. Aqueous solutions of 6,7-dimethyl-5,6,7,8-tetrahydropterin (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 6,7-dimethyl-5,6,7,8-tetrahydropterin (hydrochloride) in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

6,7-dimethyl-5,6,7,8-Tetrahydropterin is a synthetic analog of tetrahydro-L-biopterin (BH₄; Item No. 81880), a required cofactor for all NOS isoforms, phenylalanine, tyrosine, and tryptophan hydroxylases, and other enzymes.¹⁻⁵

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. Chaube, R. and Joy, K.P. Effects of ovariectomy and oestradiol-17β replacement on brain tyrosine hydroxylase in the catfish *Heteropneustes fossilis*: Changes in *in vivo* activity and kinetic parameters. *J. Endocrinol.* **175(2)**, 329-342 (2002).
3. Jennings, I. and Cotton, R. Structural similarities among enzyme pterin binding sites as demonstrated by a monoclonal anti-idiotypic antibody. *J. Biol. Chem.* **265(4)**, 1885-1889 (1990).
4. Suckling, C.J., Gibson, C.L., Huggan, J.K., et al. 6-Acetyl-7,7-dimethyl-5,6,7,8-tetrahydropterin is an activator of nitric oxide synthases. *Bioorg. Med. Chem. Lett.* **5(1)**, 1563-1566 (2008).
5. Volner, A., Zoidakis, J. and Abu-Omar, M.M. Order of substrate binding in bacterial phenylalanine hydroxylase and its mechanistic implication for pterin-dependent oxygenases. *J. Biol. Inorg. Chem.* **8(1-2)**, 121-128 (2002).

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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