

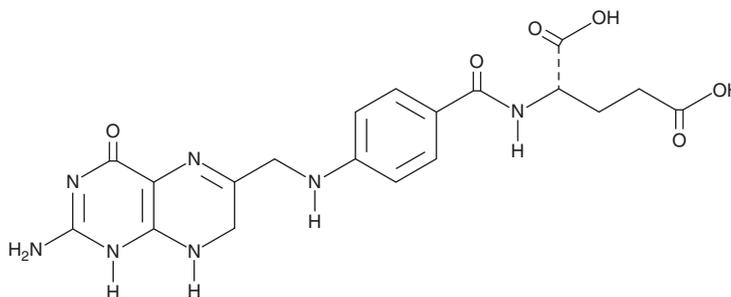
PRODUCT INFORMATION



Dihydrofolic Acid

Item No. 32750

CAS Registry No.: 4033-27-6
Formal Name: N-[4-[[[(2-amino-3,4,7,8-tetrahydro-4-oxo-6-pteridiny]methyl]amino]benzoyl]-L-glutamic acid
Synonym: NSC 165989
MF: C₁₉H₂₁N₇O₆
FW: 443.4
Purity: ≥90%
UV/Vis.: λ_{max}: 222, 281 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

Dihydrofolic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the dihydrofolic acid in the solvent of choice, which should be purged with an inert gas. Dihydrofolic acid is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of dihydrofolic acid in these solvents is approximately 5 and 1 mg/ml, respectively.

Description

Dihydrofolic acid is an active metabolite of folic acid (Item No. 20515) and an intermediate in the biosynthesis of both purines and pyrimidines.^{1,2} It is formed via the NADH-dependent reduction of folic acid by dihydrofolate reductase (DHFR).² Dihydrofolic acid (10, 50, and 100 µg/ml) reduces insulin-like growth factor 1 receptor (IGF-1R) promoter activity in a cell-based reporter assay.³

References

1. Futterman, S. Enzymatic reduction of folic acid and dihydrofolic acid to tetrahydrofolic acid. *J. Biol. Chem.* **228**(2), 1031-1038 (1957).
2. López, C.A. and Menendez, J.C. Antimetabolites. *Medicinal Chemistry of Anticancer Drugs*. 1st edition, Elsevier B.V. (2008).
3. Attias, Z., Werner, H., and Vaisman, N. Folic acid and its metabolites modulate IGF-I receptor gene expression in colon cancer cells in a p53-dependent manner. *Endocr. Relat. Cancer* **13**(2), 571-581 (2006).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM