

Tetrahydrofolic acid

Chemical Properties

CAS No.:	135-16-0
Formula:	C ₁₉ H ₂₃ N ₇ O ₆
Molecular Weight:	445.44
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Tetrahydrofolic acid is a cofactor in many reactions, especially in the metabolism of amino acids and nucleic acids. It acts as a donor of a group with one carbon atom, which is got by sequestering formaldehyde produced in other processes.
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Solubility Information

Solubility	Water: Insoluble DMSO: Soluble (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.245 mL	11.225 mL	22.450 mL
5 mM	0.449 mL	2.245 mL	4.490 mL
10 mM	0.224 mL	1.122 mL	2.245 mL
50 mM	0.045 mL	0.224 mL	0.449 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. García-Molina F, Muñoz-Muñoz JL, Martínez-Ortiz F, García-Ruiz PA, Tudela J, García-Cánovas F, Rodríguez-López JN. Tetrahydrofolic Acid is a potent suicide substrate of mushroom tyrosinase. *J Agric Food Chem*. 2011 Feb 23;59(4):1383-91. doi: 10.1021/jf1035433. Epub 2011 Jan 25. PubMed PMID: 21265541.
2. Marsilje TH, Hedrick MP, Desharnais J, Capps K, Tavassoli A, Zhang Y, Wilson IA, Benkovic SJ, Boger DL. 10-(2-benzoxazolcarbonyl)-5,10-dideaza-acyclic-5,6,7,8-tetrahydrofolic acid: a potential inhibitor of GAR transformylase and AICAR transformylase. *Bioorg Med Chem*. 2003 Oct 1;11(20):4503-9. PubMed PMID: 13129586.
3. Zhang Y, Desharnais J, Marsilje TH, Li C, Hedrick MP, Gooljarsingh LT, Tavassoli A, Benkovic SJ, Olson AJ, Boger DL, Wilson IA. Rational design, synthesis, evaluation, and crystal structure of a potent inhibitor of human GAR Tfase: 10-(trifluoroacetyl)-5,10-dideazaacyclic-5,6,7,8-tetrahydrofolic acid. *Biochemistry*. 2003 May 27;42(20):6043-56. PubMed PMID: 12755606.
4. Marsilje TH, Labroli MA, Hedrick MP, Jin Q, Desharnais J, Baker SJ, Gooljarsingh LT, Ramcharan J, Tavassoli A, Zhang Y, Wilson IA, Beardsley GP, Benkovic SJ, Boger DL. 10-Formyl-5,10-dideaza-acyclic-5,6,7,8-tetrahydrofolic acid (10-formyl-DDACTHF): a potent cytotoxic agent acting by selective inhibition of human GAR Tfase and the de novo purine biosynthetic pathway. *Bioorg Med Chem*. 2002 Aug;10(8):2739-49. PubMed PMID: 12057663.

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