

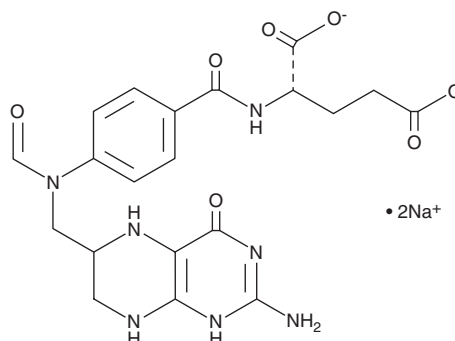
PRODUCT INFORMATION



10-Formyltetrahydrofolate (sodium salt) (technical grade)

Item No. 35763

CAS Registry No.: 914800-65-0
Formal Name: N-[4-[[[(2-amino-1,4,5,6,7,8-hexahydro-4-oxo-6-pteridiny]methyl]formylamino]benzoyl]-L-glutamic acid, disodium salt
Synonyms: 10-CHO-FH₄, 10-CHO-THF, N¹⁰-Formyltetrahydrofolate, 10-formyl H₄PteGlu, 10-fTHF
MF: C₂₀H₂₁N₇O₇ • 2Na
FW: 517.4
Supplied as: A solid
Storage: -80°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

10-Formyltetrahydrofolate (sodium salt) (technical grade) is supplied as a solid. A stock solution may be made by dissolving the 10-formyltetrahydrofolate (sodium salt) (technical grade) in the solvent of choice, which should be purged with an inert gas. 10-Formyltetrahydrofolate (sodium salt) (technical grade) is slightly soluble in methanol.

10-Formyltetrahydrofolate (sodium salt) (technical grade) is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

10-Formyltetrahydrofolate is a formyl donor and cofactor, as well as a metabolite of 5,10-methylenetetrahydrofolic acid (folitixorin; Item No. 33967).¹ It is formed from 5,10-methylenetetrahydrofolic acid by methylenetetrahydrofolate dehydrogenase 1 (MTHFD1) in the cytosol and MTHFD2 and MTHFD2L in the mitochondria. 10-Formyltetrahydrofolate provides the formyl group for conjugation to methionine-tRNA, which is required for mitochondrial protein translation initiation, and is also involved in purine biosynthesis.^{2,3}

References

1. Li, A.M. and Ye, J. Reprogramming of serine, glycine and one-carbon metabolism in cancer. *Biochim. Biophys. Acta Mol. Basis Dis.* **1866(10)**, 165841 (2020).
2. Minton, D.R., Nam, M., McLaughlin, D.J., *et al.* Serine catabolism by SHMT2 is required for proper mitochondrial translation initiation and maintenance of formylmethionyl-tRNAs. *Mol. Cell* **69(4)**, 610-621 (2018).
3. Berg, J.M., Tymoczko, J.L., and Stryer, L. Nucleotide Biosynthesis. *Biochemistry*. 5th edition, W.H. Freeman (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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