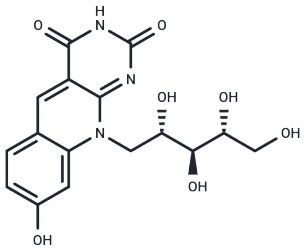
Data Sheet (Cat.No.T37978)

TargetMol

Coenzyme FO

Chemical Properties



CAS No. : 37333-48-5

Formula: C16H17N3O7

Molecular Weight: 363.32

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Coenzyme FO, a deazaflavin chromophore, is essential as a hydride acceptor/donor in the central methanogenic pathway [1][2].
Targets(IC50)	Others
In vitro	Coenzyme FO is an intermediate in the synthesis of F420, while coenzyme F420 is a low redox potential electron carrier involved in energy metabolism, NADP reduction, oxygen detoxification, and sulfite reduction in methanogenic and certain non-methanogenic archaea. F420 can be reduced by F420-dependent hydrogenase and assists in resisting the antimicrobial action of macrophages in Mycobacterium tuberculosis[3].

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble) DMSO: 140 mg/mL (385.34 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 5.6 mg/mL (15.41 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7524 mL	13.762 mL	27.5239 mL
5 mM	0.5505 mL	2.7524 mL	5.5048 mL
10 mM	0.2752 mL	1.3762 mL	2.7524 mL
50 mM	0.055 mL	0.2752 mL	0.5505 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Mills DJ, et al. De novo modeling of the F(420)-reducing [NiFe]-hydrogenase from a methanogenic archaeon by cryo-electron microscopy. Elife. 2013;2:e00218. Published 2013 Mar 5.
Philmus B, et al. Biosynthetic versatility and coordinated action of 5'-deoxyadenosyl radicals in deazaflavin biosynthesis. J Am Chem Soc. 2015;137(16):5406-5413.
de Poorter LMI, et al. Hydrogen concentrations in methane-forming cells probed by the ratios of reduced and oxidized coenzyme F420. Microbiology. 2005;151(Pt 5):1697-1705.
Purwantini E, et al. Conversion of NO2 to NO by reduced coenzyme F420 protects mycobacteria from nitrosative damage. Proc Natl Acad Sci U S A. 2009;106(15):6333-6338.