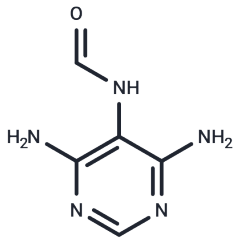
Data Sheet (Cat.No.T19320)

TargetMol

FAPy-adenine

Chemical Properties



CAS No. : 5122-36-1

Formula: C5H7N5O

Molecular Weight: 153.14

Storage: Store at low temperature
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	FAPy-adenine (4,6-diamino-5-N-formamidopyrimidine) is an oxidised DNA base, and its levels in the brains of Alzheimer's disease patients show an upward trend.
Targets(IC50)	Nucleoside Antimetabolite/Analog,Endogenous Metabolite
In vitro	In the absence of the external field the FAPy-adenine is able to form pairs with all four canonical nucleic acid bases. In contrast, in the presence of the external field the mispairing abilities of FAPy-adenine become insignificant since the most stable dimers are formed with thymine.[1]
In vivo	There is an increased trend in the levels of FAPy-adenine in the AD brain. The nuclear DNA damage by oxygen-derived radicals is increased in Alzheimer's disease and support the concept that the brain is under increased oxidative stress in Alzheimer's disease.[1]

Solubility Information

Solubility	DMSO: 15 mg/mL (97.95 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (6.53 mM),Sonication is recommended. *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	6.530 mL	32.6499 mL	65.2997 mL
5 mM	1.306 mL	6.530 mL	13.0599 mL
10 mM	0.653 mL	3.265 mL	6.530 mL
50 mM	0.1306 mL	0.653 mL	1.306 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

Gabbita SP, et al. Increased nuclear DNA oxidation in the brain in Alzheimer's disease.
Cysewski P, et al. Theoretical description of the coding potential of diamino-5-formamidopyrimidines. Z Naturforsch C J Biosci. 1999 Mar-Apr;54(3-4):239-45.
Lee SH, et al. A rapid and sensitive method for quantitation of nucleosides in human urine using liquid chromatography/mass spectrometry with direct urine injection. Rapid Commun Mass Spectrom. 2004;18(9):973-7.