Pyridoxal phosphate

Cat. No.: HY-B1744

CAS No.: 54-47-7

Molecular Formula: $C_8H_{10}NO_6P$

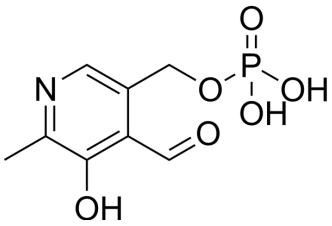
Molecular Weight: 247.14

Target: Reverse Transcriptase; Endogenous Metabolite

Pathway: Anti-infection; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (252.89 mM; ultrasonic and warming and heat to 60°C)

H_2O : 5 mg/mL (20.23 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.0463 mL	20.2314 mL	40.4629 mL
5 mM	0.8093 mL	4.0463 mL	8.0926 mL
10 mM	0.4046 mL	2.0231 mL	4.0463 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 2 mg/mL (8.09 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description

Pyridoxal phosphate is the active form of vitamin B6, acts as an inhibitor of reverse transcriptases, and is used for the treatment of tardive dyskinesia.

IC_{50} & Target

Human Endogenous Metabolite	Human Endogenous Metabolite

In Vitro

Pyridoxal 5′-phosphate severely inhibits the DNA Polymerase and RNase H. Pyridoxal phosphate results in an imnediate reduction in the rate of DNA synthesis[1]. Conjugation to pyridoxal phosphate fully inhibits NEIL2. Pyridoxal phosphate-conjugated NEIL2 shows much lower activity than the intact enzyme over a wide range of enzyme/substrate ratios. After Pyridoxal phosphate conjugation, the ability of NEIL2 to bind the THF-ligand is completely lost[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Modak MJ. Pyridoxal 5' phosphate: a selective inhibitor of oncornaviral DNA polymerases. Biochem Biophys Res Commun. 1976 Jul 12;71(1):180-7.

[2]. Grin IR, et al. Inactivation of NEIL2 DNA glycosylase by pyridoxal phosphate reveals a loop important for substrate binding. Biochem Biophys Res Commun. 2010 Mar 26;394(1):100-5.

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