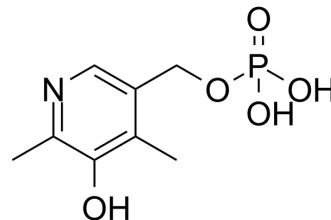


4-Deoxypyridoxine 5'-phosphate

Cat. No.:	HY-N2553		
CAS No.:	883-84-1		
Molecular Formula:	C ₈ H ₁₂ NO ₅ P		
Molecular Weight:	233.16		
Target:	LPL Receptor		
Pathway:	GPCR/G Protein		
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 : 100 mg/mL (428.89 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
Preparing Stock Solutions	1 mM	4.2889 mL	21.4445 mL	42.8890 mL
	5 mM	0.8578 mL	4.2889 mL	8.5778 mL
	10 mM	0.4289 mL	2.1445 mL	4.2889 mL
Please refer to the solubility information to select the appropriate solvent.				
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (10.72 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (10.72 mM); Clear solution			

BIOLOGICAL ACTIVITY

Description	4-Deoxypyridoxine 5'-phosphate is a Pyridoxal 5'-phosphate analogue and a sphingosine 1-phosphate (S1P) inhibitor. 4-Deoxypyridoxine 5'-phosphate inhibits ornithine decarboxylase activity with a K _i of 60 μM. 4-Deoxypyridoxine 5'-phosphate is a competitive inhibitor of the activation of glutamate apodecarboxylase by Pyridoxal 5'-phosphate (K _i of 0.27 μM) and strongly inhibits glutamate-dependent labeling of glutamate decarboxylase ^{[1][2][3]} .
IC₅₀ & Target	Sphingosine 1-phosphate (S1P) ^[1] Ornithine decarboxylase ^[2] Glutamate apodecarboxylase ^[3]

REFERENCES

- [1]. Mamoru Ohtoyo, et al. Scintillation Proximity Assay to Detect the Changes in Cellular Dihydrospingosine 1-Phosphate Levels. *Lipids*. 2016 Oct;51(10):1207-1216.
- [2]. M J Connor, et al. Epidermal Pyridoxal 5'-phosphate Depletion, Inhibition of DNA Synthesis, and Inhibition of the Expression of Ornithine Decarboxylase Activity by the Vitamin B-6 Antagonist 4'-deoxypyridoxine. *J Invest Dermatol*. 1983 Aug;81(2):136-9.
- [3]. D L Martin, et al. Glutamate-dependent Active-Site Labeling of Brain Glutamate Decarboxylase. *J Neurochem*. 1990 Aug;55(2):524-32.
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Caution: Product has not been fully validated for medical applications. For research use only.

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