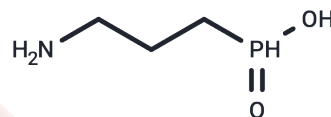


3-Aminopropylphosphinic acid

Chemical Properties

CAS No. :	103680-47-3
Formula:	C ₃ H ₁₀ NO ₂ P
Molecular Weight:	123.092
Storage:	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	3-Aminopropylphosphinic acid (3-APPA), a phosphonic analog of gamma-aminobutyric acid (GABA), acts as a potent and selective agonist of the GABA B receptor.
Targets(IC50)	Others,GABA Receptor
In vitro	3-Aminopropylphosphinic acid, at a concentration of 10 μM, exhibits a concentration-dependent reduction of cholinergic twitch contraction in the electrically stimulated ileum, demonstrating an IC ₅₀ value of 1.84-0.23 μM[2]. Additionally, this compound serves as an anti-aging agent for the skin[4].
In vivo	Administered intravenously at a dosage of 5 mg/kg, 3-Aminopropylphosphinic acid counteracts the inhibitory actions of GABA on vagal bronchospasm in guinea pigs. This finding underscores the compound's potential role in modulating GABA-related bronchial responses.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	8.1241 mL	40.6207 mL	81.2414 mL
5 mM	1.6248 mL	8.1241 mL	16.2483 mL
10 mM	0.8124 mL	4.0621 mL	8.1241 mL
50 mM	0.1625 mL	0.8124 mL	1.6248 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

- Luzzi S, Franchi-Micheli S, Ciuffi M, Pajani A, Zilletti L. GABA-related activities of amino phosphonic acids on guinea-pig ileum longitudinal muscle. *J Auton Pharmacol.* 1986 Sep;6(3):163-9.
- Hills JM, Dingsdale RA, Parsons ME, Dolle RE, Howson W. 3-Aminopropylphosphinic acid--a potent, selective GABAB receptor agonist in the guinea-pig ileum and rat anococcygeus muscle. *Br J Pharmacol.* 1989 Aug;97(4):1292-6.
- Chapman RW, Danko G, Rizzo C, Egan RW, Mauser PJ, Kreutner W. Prejunctional GABA-B inhibition of cholinergic, neurally-mediated airway contractions in guinea-pigs. *Pulm Pharmacol.* 1991;4(4):218-24.
- Cho Youn-Ki, et al. 3-Aminopropyl dihydrogen phosphate (3-APPA; 3-aminopropane phosphoric acid); a novel anti-aging substance. *Journal of Investigative Dermatology*, vol. 4, no. 106, 2015, p. 895.

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