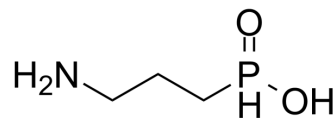


## 3-Aminopropylphosphinic acid

<b>Cat. No.:</b>	HY-115763
<b>CAS No.:</b>	103680-47-3
<b>Molecular Formula:</b>	C <sub>3</sub> H <sub>10</sub> NO <sub>2</sub> P
<b>Molecular Weight:</b>	123.09
<b>Target:</b>	GABA Receptor
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	3-Aminopropylphosphinic acid (3-APPA) is a phosphonic analog of GABA. 3-Aminopropylphosphinic acid is a potent, selective GABA <sub>B</sub> receptor agonist <sup>[1]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	GABAB <sup>[1]</sup>	
<b>In Vitro</b>	3-Aminopropylphosphinic acid (10 μM) causes a concentration-dependent inhibition of the cholinergic twitch contraction in the electrically stimulated ileum (IC <sub>50</sub> =1.84-0.23 μM) <sup>[2]</sup> 3-Aminopropylphosphinic acid acts as an anti-aging substance for skin <sup>[4]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
<b>In Vivo</b>	3-Aminopropylphosphinic acid (5 mg/kg; i.v.) blocks the inhibitory effects of GABA against vagal broncho-spasm in guinea pigs <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	<b>Animal Model:</b>	guinea pigs <sup>[3]</sup>
	<b>Dosage:</b>	5 mg/kg
	<b>Administration:</b>	IV
	<b>Result:</b>	Blocked the inhibitory effects of GABA against vagal broncho-spasm.

### REFERENCES

- [1]. 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.
- [2]. 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.
- [3]. 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.

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[4]. 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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**Caution: Product has not been fully validated for medical applications. For research use only.**

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