

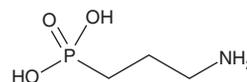
# PRODUCT INFORMATION



## 3-Aminopropylphosphonic Acid

Item No. 23556

**CAS Registry No.:** 13138-33-5  
**Formal Name:** P-(3-aminopropyl)-phosphonic acid  
**Synonyms:**  $\beta$ -Aminopropylphosphonic Acid, 3-APPA, NSC 133832  
**MF:**  $C_3H_{10}NO_3P$   
**FW:** 139.1  
**Purity:**  $\geq 95\%$   
**Supplied as:** A crystalline solid  
**Storage:**  $-20^\circ C$   
**Stability:**  $\geq 4$  years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

3-Aminopropylphosphonic acid (3-APPA) is supplied as a crystalline solid. Aqueous solutions of 3-APPA can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 3-APPA in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

3-APPA is a phosphonic analog of GABA that acts as a partial agonist of GABA<sub>B</sub> receptors ( $IC_{50} = 1.5 \mu M$  in a radioligand binding assay).<sup>1,2</sup> It induces relaxation in unstimulated isolated guinea pig ileum longitudinal muscle and reverses GABA- and baclofen-induced inhibition of twitch responses in isolated guinea pig ileum longitudinal muscle.<sup>2</sup> 3-APPA (5 mg/kg) completely inhibits GABA- and baclofen-induced inhibition of vagally stimulated bronchospasms in guinea pigs.<sup>3</sup> It also reverses the antitussive effect of baclofen in cats when administered at a dose of 3 mg/kg.<sup>4</sup>

### References

1. Luzzi, S., Franchi-Micheli, S., Ciuffi, M., *et al.* GABA-related activities of amino phosphonic acids on guinea-pig ileum longitudinal muscle. *J. Auton. Pharmacol.* **6(3)**, 163-169 (1986).
2. Ling, Q., Xu, X., Wei, X., *et al.* Oxymatrine induces human pancreatic cancer PANC-1 cells apoptosis via regulating expression of Bcl-2 and IAP families, and releasing of cytochrome c. *J. Exp. Clin. Cancer Res.* **30**, 66 (2011).
3. Chapman, R.W., Danko, G., Rizzo, C., *et al.* Prejunctional GABA-B inhibition of cholinergic, neurally-mediated airway contractions in guinea-pigs. *Pulm. Pharmacol.* **4(4)**, 218-224 (1991).
4. Bolser, D.C., Aziz, S.M., DeGennaro, F.C., *et al.* Antitussive effects of GABA<sub>B</sub> agonists in the cat and guinea-pig. *Br. J. Pharmacol.* **110(1)**, 491-495 (1993).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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