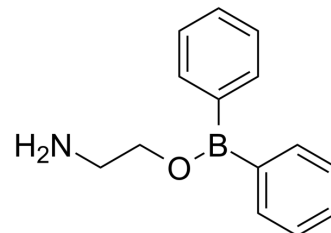


2-Aminoethyl diphenylborinate

Cat. No.:	HY-W009724		
CAS No.:	524-95-8		
Molecular Formula:	C ₁₄ H ₁₆ BNO		
Molecular Weight:	225.09		
Target:	Calcium Channel; TRP Channel		
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (1110.67 mM; Need ultrasonic)
 H₂O : 1.61 mg/mL (7.15 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	4.4427 mL	22.2133 mL	44.4267 mL
	5 mM	0.8885 mL	4.4427 mL	8.8853 mL
	10 mM	0.4443 mL	2.2213 mL	4.4427 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.08 mg/mL (9.24 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.08 mg/mL (9.24 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.08 mg/mL (9.24 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

2-Aminoethyl diphenylborinate (2-APB) is a cell-permeable inhibitor of IP3R. 2-Aminoethyl diphenylborinate also inhibits the store-operated Ca²⁺ (SOC) channel and activates some TRP channels (V1, V2 and V3)^{[1][2][3]}.

CUSTOMER VALIDATION

- Sci Immunol. 2022 Feb 4;7(68):eabk2092.
- Nat Metab. 2022 Sep 1.
- Adv Funct Mater. 2019, 1808556.
- Nat Commun. 2022 Nov 10;13(1):6796.
- Mol Cell. 2023 Jan 14;S1097-2765(22)01217-5.

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REFERENCES

[1]. Ma S, et al. Effect of Wilforine on the Calcium Signaling Pathway in Mythemna separata Walker Myocytes Using the Calcium Imaging Technique. J Agric Food Chem. 2019 Nov 27.

[2]. Boyacı MG, et al. Effects of 2-Aminoethyl Diphenylborinate, a Modulator of Transient Receptor Potential and Orai Channels in Subarachnoid Hemorrhage: An Experimental Study.

[3]. Takahashi K, et al. Molecular mechanism of 2-APB-induced Ca^{2+} influx in external acidification in PC12. Exp Cell Res. 2014 May 1;323(2):337-45.

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

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