

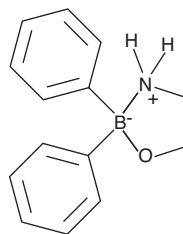
Product Information



2-APB

Catalog No. 64970

CAS Registry No.: 524-95-8
Formal Name: 2,2-diphenyl-1,3,2-oxaza-borolidine internal salt
MF: C₁₄H₁₆BNO
FW: 225.1
Purity: ≥98%
Stability: ≥1 year -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that 2-APB be stored as supplied at -20°C. It will be stable for at least one year.

2-APB is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-APB in an organic solvent purged with an inert gas. 2-APB is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 2-APB in these solvents is approximately 5 mg/ml in ethanol and approximately 20 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 2-APB can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 2-APB in PBS (pH 7.2) is approximately 50 µg/ml. We do not recommend storing the aqueous solution for more than one day.

Receptor-induced calcium signalling relies on inositol-1,4,5-triphosphate receptors.¹ These receptors can be blocked by the cell-permeable antagonist 2-APB. In fura-loaded DDT₁MF-2 cells, 75 µM 2-APB completely ablates the thapsigargin-induced calcium transients that are also antagonized by xestospongin C.²

References

1. Ma, H.-T., Patterson, R.L., van Rossum, D.B., *et al.* Requirement of the inositol trisphosphate receptor for activation of store-operated Ca²⁺ channels. *Science* **287**, 1647-1651 (2000).
2. van Rossum, D.B., Patterson, R.L., Ma, H.-T., *et al.* Ca²⁺ entry mediated by store depletion, S-nitrosylation, and TRP3 channels. Comparison of coupling and function. *J. Biol. Chem.* **275**(37), 28562-28568 (2000).

Related Products

D-*myo*-Inositol-1,4,5-triphosphate (potassium salt) - Cat. No. 60960 • Xestospongin C - Cat. No. 64950

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSD supervisor at your institution.

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