

Product Information



(+)-Xestospongina A

Catalog No. 10006794

CAS Registry No.: 88840-02-2
Formal Name: [1R-(1R*,4aR*,11R*,12aS*,13R*,16aR*,23R*,24aS*)]-eicosahydro-5H,17H-1,23:11,13-diethano-2H,14H-[1,11]dioxacyclo-eicosino[2,3-b:12,13-b']dipyridine

Synonyms: XeA; Araguspongina D

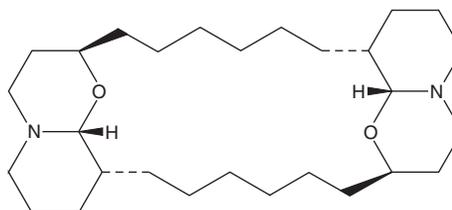
MF: C₂₈H₅₀N₂O₂

FW: 446.7

Purity: ≥90%

Stability: ≥1 year at -20°C

Supplied as: A solution in acetone



Laboratory Procedures

For long term storage, we suggest that (+)-xestospongina A be stored as supplied at -20°C. It should be stable for at least one year.

(+)-Xestospongina A is supplied as a solution in acetone. To change the solvent, simply evaporate the acetone under a gentle stream of nitrogen and immediately add the solvent of choice. (+)-Xestospongina A is freely soluble in solvents such as chloroform, ethyl acetate, and methyl acetate.

(+)-Xestospongina A is sparingly soluble in aqueous buffers. Further dilutions of the organic solvent 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. We do not recommend storing the aqueous solution for more than one day.

Xestospongins are marine natural products first isolated from pacific basin sponges, and noted to have vasodilatory properties.¹ Inositol phosphates (IPs) are important signal transduction messengers acting *via* IP₃ receptors to promote the mobilization of Ca²⁺ from intracellular stores.² Xestospongina A antagonizes the calcium-releasing action of inositol-1,4,5-trisphosphate at the receptor level in cerebral microsomes, with an IC₅₀ of 2.5 μM.³ It is thus about ten times less potent than xestospongina C as an antagonist of the IP₃ receptor.

References

1. Nakagawa, M. and Endo, M. Structures of xestospongina A, B, C and D, novel vasodilative compounds from marine sponge, *Xestospongia exigua*. *Tetrahedron Lett.* **25(30)**, 3227-3230 (1984).
2. Majerus, P.W. Inositol phosphate biochemistry. *Annu. Rev. Biochem.* **61**, 225-250 (1992).
3. Gafni, J., Munsch, J.A., Lam, T.H., *et al.* Xestospongins: potent membrane permeable blockers of the inositol 1,4,5-triphosphate receptor. *Neuron* **19**, 723-733 (1997).

Related Products

Xestospongina C - Cat. No. 64950 • Araguspongina B - Cat. No. 10006797

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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 *via* email to your institution.

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