Certificate of Analysis

Product Name: **(-)-Xestospongin C** **Catalog No.: 1280** **Batch No.: 8**

CAS Number: 88903-69-9

IUPAC Name: (1*R*,4a*R*,11*R*,12a*S*,13*S*,16a*S*,23*R*,24a*S*)-Eicosahydro-5*H*,17*H*-1,23:11,13-diethano-2*H*,14*H*-[1,11]dioxacycloeicosino[2,3-*b*:12,13-*b*']dipyridine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{28}H_{50}N_2O_2$

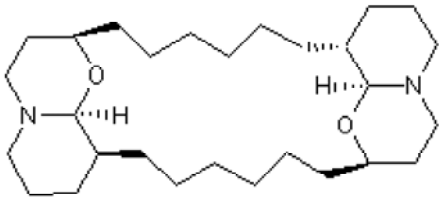
Batch Molecular Weight: 446.71

Physical Appearance: Clear film

Solubility: DMSO to 2 mM
ethanol to 2 mM

Storage: Desiccate at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.5 (Chloroform:Methanol:Water [85:15:2])

Mass Spectrum: Consistent with structure

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

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Description:

Reported inhibitor of IP_3-dependent Ca^{2+} release. Inhibits bradykinin-induced Ca^{2+} release in PC12 cells and attenuates PHP-induced IL-2 production in Jurkat T cells. Exhibits no effect on ryanodine receptor-mediated Ca^{2+} release in PC12 cells. Does not interact with the IP_3 binding site. Recently shown to be an ineffective antagonist of IP_3-evoked Ca^{2+} release in IP_3 receptor expressing DT40 cells. Cell permeable.

Physical and Chemical Properties:

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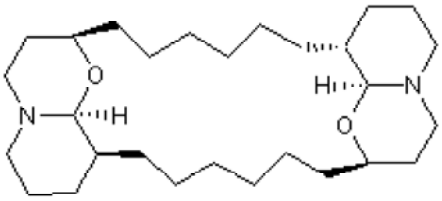
Batch Molecular Structure:



Storage: Desiccate at -20°C. This product is packaged under an inert atmosphere.

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 2 mM
ethanol to 2 mM

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Saleem *et al* (2014) Interactions of antagonists with subtypes of inositol 1,4,5-trisphosphate (IP_3) receptor. Br.J.Pharmacol. ***171*** 3298. PMID: 24628114.

Dadsetan *et al* (2008) Store-operated Ca^{2+} influx causes Ca^{2+} release from the intracellular Ca^{2+} channels that is required for T cell activation. J.Biol.Chem. ***283*** 12512. PMID: 18316371.

Ozaki *et al* (2002) Inhibitory mechanism of xestospongin-C on contraction and ion channels in the intestinal smooth muscle. Br.J.Pharmacol. ***137*** 1207. PMID: 12466229.

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