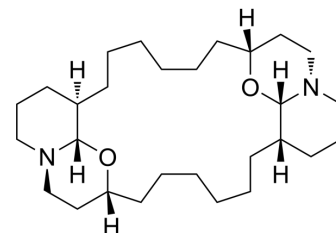


Xestospongine C

Cat. No.:	HY-103312		
CAS No.:	88903-69-9		
Molecular Formula:	C ₂₈ H ₅₀ N ₂ O ₂		
Molecular Weight:	446.71		
Target:	Calcium Channel; Apoptosis		
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Apoptosis		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description	Xestospongine C ((-)-Xestospongine C) is a selective, reversible inositol 1,4,5-trisphosphate receptor (IP3R) inhibitor. Xestospongine C acts as an inhibitor of the sarcoplasmic/endoplasmic reticulum Ca ²⁺ ATPase (SERCA) pump of internal stores. Xestospongine C blocks IP3-induced Ca ²⁺ release from cerebellar microsomes with an IC ₅₀ of 358 nM. Xestospongine C is a valuable tool for investigating the structure and function of IP3Rs and Ca ²⁺ signaling in neuronal and nonneuronal cells [1][2][3].
IC₅₀ & Target	IP3R
In Vitro	Xestospongine C (XeC; 10 μM; 1 h before Aβ) pretreatment before Aβ ₁₋₄₂ (20 μM; 24 hours) application displays a significant decrease in the early apoptotic rate (9.87%) compared to the Aβ alone treated group (18.38%) ^[1] . Xestospongine C (10 μM; 1 h before Aβ) and Aβ ₁₋₄₂ (20 μM; 100 s) has significant main effects on the peak value and average values of Ca ²⁺ changes, as well as a significant interaction in primary cultured hippocampal neurons ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Xestospongine C (3 μM; intracerebroventricular injection by a pump for four weeks) ameliorates the disinhibition-like behavior and long term spatial memory deficits of 8-month-old male APP/PS1 mice of Alzheimer's disease ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Environ Pollut. 2023 Dec 16:343:123167.

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REFERENCES

[1]. Wang ZJ, et al. Xestospongine C, a Reversible IP3 Receptor Antagonist, Alleviates the Cognitive and Pathological Impairments in APP/PS1 Mice of Alzheimer's Disease. J Alzheimers Dis. 2019;72(4):1217-1231.

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receptor. Neuron. 1997 Sep;19(3):723-33. doi: 10.1016/s0896-6273(00)80384-0. PMID: 9331361.

[3]. Castonguay A, et al. Xestospongjin C is a potent inhibitor of SERCA at a vertebrate synapse. Cell Calcium. 2002;32(1):39-47.

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

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