PRODUCT INFORMATION



(+)-Aeroplysinin-1

Item No. 21498

CAS Registry No.:	28656-91-9	
Formal Name:	(1S,6R)-3,5-dibromo-1,6-dihydroxy-4- methoxy-2,4-cyclohexadiene-1-acetonitrile	ОН
Synonym:	NSC 170364	Br
MF:	C ₉ H ₉ Br ₂ NO ₃	ОН
FW:	339.0	
Purity:	≥95%	`ó
Supplied as:	A solid	 Br
Storage:	-20°C	
Stability:	≥4 years	
Information represent	s the product specifications. Batch specific analytical result	s are provided on each certificate of analysis

Laboratory Procedures

(+)-Aeroplysinin-1 is supplied as a solid. A stock solution may be made by dissolving the (+)-aeroplysinin-1 in the solvent of choice, which should be purged with an inert gas. (+)-Aeroplysinin-1 is soluble in the organic solvent methanol.

Description

(+)-Aeroplysinin-1 is a metabolite originally isolated from the marine sponge V. aerophoba with diverse biological activities.¹ (+)-Aeroplysinin-1 (0.25-0.5 μM) induces cell death in MCF-7 and ZR-75-1 human breast cancer cells in a time- and concentration-dependent manner but has no effect on normal human fibroblasts at concentrations up to 5 μ M.² It also blocks EGF-induced endocytosis of the EGF receptor (EGFR) and EGF-dependent cell proliferation in MCF-7 cells. (+)-Aeroplysinin-1 inhibits bovine aortic endothelial (BAE) cell proliferation and cord formation in a Matrigel[™] assay.³ It inhibits angiogenesis in a dose-dependent manner in a chick chorioallantoic membrane (CAM) assay when administered from 1.5 to 3 nmol per egg. (+)-Aeroplysinin-1 also has antibacterial activity against Gram-positive bacteria, including S. aureus, S. albus, and B. subtilis, but not Gram-negative bacteria and inhibits HIV-1 replication (IC₅₀ = 14.6 μ M) via inhibition of HIV-1 reverse transcriptase.⁴

References

- 1. Fattorusso, E., Minale, L., and Sodano, G. Aeroplysinin-1, an antibacterial bromo-compound from the sponge Verongia aerophoba. J. Chem. Soc. Perkin 1 1(0), 16-18 (1972).
- 2. Kreuter, M.H., Leake, R.E., Müller-Klieser, W., et al. Inhibition of intrinsic protein tyrosine kinase activity of EGF-receptor kinase complex from human breast cancer cells by the marine sponge metabolite (+)-aeroplysinin-1. Comp. Biochem. Physiol. B 97(1), 151-158 (1990).
- 3. Rodríguez-Nieto, S., González-Iriarte, M., Carmona, R., et al. Antiangiogenic activity of aeroplysinin-1, a brominated compound isolated from a marine sponge. FASEB J. 16(2), 261-263 (2002).
- García-Vilas, J.A., Martínez-Poveda, B., Quesada, A.R., et al. Aeroplysinin-1, a sponge-derived multi-targeted bioactive marine drug. Mar. Drugs 14(1), (2015).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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