Product Data Sheet

Aeroplysinin 1

Cat. No.:HY-19827CAS No.:28656-91-9Molecular Formula: $C_9H_9Br_2NO_3$ Molecular Weight:338.98

Target:Bacterial; HIV; ApoptosisPathway:Anti-infection; ApoptosisStorage:Pure form -20°C 3 years

In solvent -80°C 6 months

-20°C 1 month

BIOLOGICAL ACTIVITY

Description	Aeroplysinin 1 ((+)-Aeroplysinin-1), a secondary metabolite isolated from marine sponges, shows potent antibiotic effects on Gram-positive bacteria and exerts antiviral activity against HIV-1 (IC $_{50}$ =14.6 μ M). Aeroplysinin 1 has anti-inflammatory, antiangiogenic and anti-tumor activities. Aeroplysinin 1 induces apoptosis in endothelial cells ^{[1][2]} .		
IC ₅₀ & Target	Bacterial	HIV-1 14.6 μM (IC ₅₀)	Apoptosis
In Vitro	Aeroplysinin 1 shows anti-proliferative effect against tumor cells (HT-1080, HTC-116, HeLa, THP-1, NOMO-1 and HL-60 cells), with IC $_{50}$ s ranging from 2.3 to 17 μ M $^{[1]}$. Aeroplysinin-1 also exhibits an antiviral activity toward HIV-1 caused by inhibition of its reverse transcriptase activity $^{[1]}$. Aeroplysinin 1 inhibits P. phosphoreum, C. wailesii, P. minimum and HIV with IC $_{50}$ s of 3.5, 5.6, 7.0 and 14.6 μ M $^{[1]}$. Aeroplysinin 1 inhibits human endothelial cells (EVLC-2, HMEC, RF-24, and HUVEC cells), with IC $_{50}$ s ranging from 2.6 to 4.7 μ M $^{[2]}$. (+)-Aeroplysinin-1 (0.25-0.5 μ M) blocks the EGF-dependent proliferation of both MCF-7 and ZR-75-1 human breast cancer cells and inhibits the ligand-induced endocytosis of the EGF receptor in vitro $^{[3]}$. MCE has not independently confirmed the accuracy of these methods. They are for reference only.		

REFERENCES

- $[1]. Garc\'ia-Vilas JA, et al.\ Aeroplysinin-1, a Sponge-Derived Multi-Targeted Bioactive Marine Drug.\ Mar Drugs.\ 2015; 14(1):1.\ Published\ 2015\ Dec\ 22.$
- [2]. Martínez-Poveda B, et al. The brominated compound aeroplysinin-1 inhibits proliferation and the expression of key pro- inflammatory molecules in human endothelial and monocyte cells. PLoS One. 2013;8(1):e55203.
- [3]. Kreuter MH, 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. 1990;97(1):151-158.

 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$

Tel: 609-228-6898 Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA

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