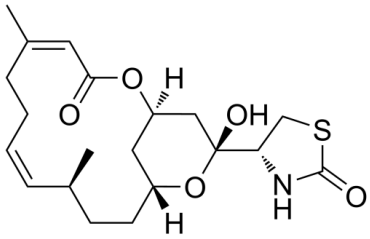
Data Sheet

Product Name:	Latrunculin B
Cat. No.:	CS-0022006
CAS No.:	76343-94-7
Molecular Formula:	$C_{20}H_{29}NO_5S$
Molecular Weight:	395.51
Target:	Fungal
Pathway:	Anti-infection
Solubility:	10 mM in DMSO



BIOLOGICAL ACTIVITY:

Latrunculin B, an antimicrobial marine alkaloid, is an **actin polymerization** inhibitor. Latrunculin B regulates pulmonary vein electrophysiological characteristics and attenuates stretch-induced arrhythmogenesis. Antifungal and antiprotozoal activity[1][2]. ***In Vitro:*** Latrunculin B displays growth inhibition of HeLa cells with an IC_{50} value of 1.4 μM[1].

Latrunculin B modulates electrophysiological characteristics and arrhythmogenesis in pulmonary vein cardiomyocytes. Latrunculin B (100 nM) decreases the spontaneous electrical activity by 16±4% in pulmonary vein (PV) preparations. Latrunculin B (100 nM) decreases the late Na^+ current, L-type Ca^{2+} current, Na^+/Ca^{2+} exchanger current, and stretch-activated BKCa current in PV cardiomyocytes. Latrunculin B reduces the transient outward K^+ current and ultra-rapid delayed rectifier K^+ current, but increases the delayed rectifier K^+ current in isolated PV cardiomyocytes. Latrunculin B (100 nM) decreases intracellular Ca^{2+} transient and sarcoplasmic reticulum Ca^{2+} content in PV cardiomyocytes. Latrunculin B attenuates stretch-induced increased spontaneous electrical activity and trigger activity[2].

References:

[1]. Diaa T A Youssef, et al. Magnificines A and B, Antimicrobial Marine Alkaloids Featuring a Tetrahydrooxazolo[3,2-a]azepine-2,5(3H,6H)-dione Backbone from the Red Sea Sponge ***Negombata magnifica***. Mar Drugs. 2021 Apr 12;19(4):214.

[2]. Yen-Yu Lu, et al. Latrunculin B modulates electrophysiological characteristics and arrhythmogenesis in pulmonary vein cardiomyocytes. Clin Sci (Lond). 2016 May;130(9):721-32.

CAIndexNames:

2-Thiazolidinone, 4-[(1R,4Z,8Z,10S,13R,15R)-15-hydroxy-5,10-dimethyl-3-oxo-2,14-dioxabicyclo[11.3.1]heptadeca-4,8-dien-15-yl]-, (4R)-

SMILES:

O=C1SC[C@@H]([C@]2(O)O[C@]3([H])CC[C@H](C)/C=C\CC/C(C)=C\C(O[C@@](C3)([H])C2)=O)N1

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

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