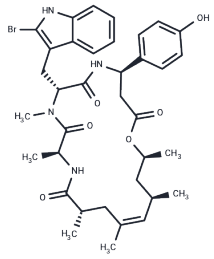
Data Sheet (Cat.No.T11712)

TargetMol

Jasplakinolide

Chemical Properties



CAS No. : 102396-24-7

Formula: C36H45BrN4O6

Molecular Weight: 709.67

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Jasplakinolide(Jaspamide), a naturally occurring cyclic peptide from marine sponges, is a potent inducer of actin polymerization.Jasplakinolide exhibits antifungal and antitumor activity and stabilizes pre-existing actin filaments. Jasplakinolide competitively binds to F-actin with the ghost pen cyclic peptide and has a Kd value of 15 nM for F-actin.
Targets(IC50)	Microtubule Associated,Arp2/3 Complex,Antifungal
In vitro	Jasplakinolide, at a concentration of 1 mM for 60 minutes, prompts the development of apical extensions rich in actin within fixed Toxoplasma gondii tachyzoites. It exhibits an IC50 of 35 nM against PC3 prostate carcinoma cells, underscoring its potent antiproliferative capability. Additionally, when introduced at 10 μM for 2 hours during mitosis, jasplakinolide leads to the formation of binucleated cells. This compound also triggers the production of F-actin-enriched apical extensions in Toxoplasma gondii tachyzoites, demonstrating its broad impact on cellular architecture.[1][2]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4091 mL	7.0455 mL	14.0911 mL
5 mM	0.2818 mL	1.4091 mL	2.8182 mL
10 mM	0.1409 mL	0.7046 mL	1.4091 mL
50 mM	0.0282 mL	0.1409 mL	0.2818 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Bubb MR, et al. Jasplakinolide, a cytotoxic natural product, induces actin polymerization and competitively inhibits the binding of phalloidin to F-actin. J Biol Chem. 1994 May 27;269(21):14869-71.

Song X, Li D, Gan L, et al.Intravenous Injection of Na Ions Aggravates Ang II-Induced Hypertension-Related Vascular Endothelial Injury by Increasing Transmembrane Osmotic Pressure.International Journal of Nanomedicine.2023: 7505-7521.

Holzinger A, et al. Jasplakinolide: an actin-specific reagent that promotes actin polymerization. Methods Mol Biol. 2009;586:71-87.

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