

Jasplakinolide (J7473)

Quick Facts

Storage upon receipt:

- $\leq -20^{\circ}\text{C}$
- Desiccate
- Protect from light

Molecular weight: 709.68

Solvent for stock: DMSO or methanol

Absorbance in methanol: 278 ± 3 nm

Introduction

Jasplakinolide (Figure 1) was the first cyclodepsipeptide to be isolated from a marine sponge, specifically the Indo-Pacific sponge *Jaspis johnstoni*.¹ It is a nonfluorescent, cell-permeant F-actin probe composed of three amino acids, including the rare D- β -tyrosine and D-2-bromoabrine.^{1,2} A potent inducer of actin polymerization and stabilization, jasplakinolide ($K_d = 15$ nM) competes with phallotoxins for actin binding and exhibits fungicidal, insecticidal, and anticancer properties. In studies with *Candida albicans*, the MIC and MLC for jasplakinolide were established at 25 $\mu\text{g}/\text{mL}$. The compound shows no effect upon a broad range of bacteria.^{2,3}

References

1. Tetrahedron Lett 27, 2797 (1986);
2. J Am Chem Soc 108, 3123 (1986);
3. Antimicrob Agents Chemother 32, 1154 (1988);
4. J Biol Chem 275, 5163 (2000);
5. Nature Cell Biology 4, 513 (2002).

Product List *Current prices may be obtained from our Web site or from our Customer Service Department.*

Cat #	Product Name	Unit Size
J7473	jasplakinolide	100 μg

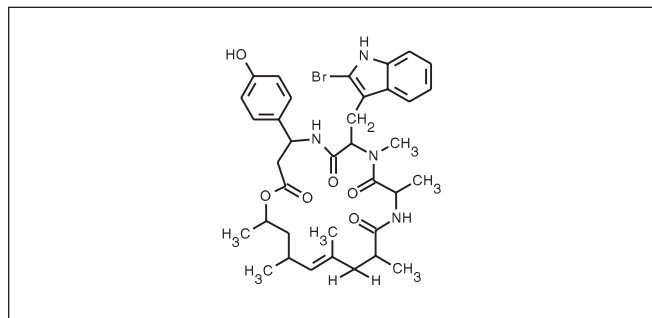


Figure 1. The structure of jasplakinolide.

Materials

Jasplakinolide is supplied in a unit size of 100 μg . Upon receipt, it should be stored frozen at $\leq -20^{\circ}\text{C}$, desiccated and protected from light. Properly stored, it is stable for up to 2 years.

To prepare a 1 mM stock solution of jasplakinolide, reconstitute in 140 μL anhydrous methanol or DMSO. Once reconstituted, the stock solution is stable for 3–4 months when stored frozen at $\leq -20^{\circ}\text{C}$, desiccated and protected from light.

Experimental Protocol

Jasplakinolide can be used for *in vitro* and *in vivo* assays using working concentrations of 50 nM to 5 μM and incubation times ranging from a few minutes to 24 hours.^{4,5} For use on live cells, jasplakinolide can be added to a variety of cell culture media with added serum and antibiotics. The optimal concentration and incubation time must be determined empirically.

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