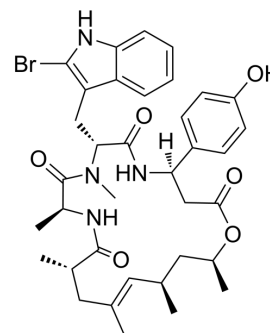


## Jasplakinolide

<b>Cat. No.:</b>	HY-P0027
<b>CAS No.:</b>	102396-24-7
<b>Molecular Formula:</b>	C <sub>36</sub> H <sub>45</sub> BrN <sub>4</sub> O <sub>6</sub>
<b>Molecular Weight:</b>	709.67
<b>Target:</b>	Arp2/3 Complex; Fungal
<b>Pathway:</b>	Cytoskeleton; Anti-infection
<b>Storage:</b>	Sealed storage, away from moisture
	Powder    -80°C    2 years
	-20°C    1 year

\* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 10 mg/mL (14.09 mM; Need ultrasonic and warming)

Concentration	Mass		
	1 mg	5 mg	10 mg
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

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

Jasplakinolide is a potent actin polymerization inducer and stabilizes pre-existing actin filaments. Jasplakinolide binds to F-actin competitively with phalloidin with a  $K_D$  of 15 nM. Jasplakinolide, a naturally occurring cyclic peptide from the marine sponge, has both fungicidal and anti-cancer activity<sup>[1][2]</sup>.

#### In Vitro

Jasplakinolide has an IC<sub>50</sub> of 35 nM for the antiproliferative effect of jasplakinolide on PC3 prostate carcinoma cells<sup>[2]</sup>. Jasplakinolide (10 μM; for 2 hours) generates binucleated cells when applied during mitosis. Jasplakinolide induces the formation of F-actin-containing apical extensions in *Toxoplasma gondii* tachyzoites<sup>[2]</sup>. Jasplakinolide (1 mM; for 60 min) induces the formation of actin-containing apical extensions in isolated *Toxoplasma gondii* tachyzoites fixed<sup>[2]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### CUSTOMER VALIDATION

- 
- Cell Mol Gastroenterol Hepatol. 2021;11(3):683-696.
  - Viruses. 2022 Jan 14;14(1):153.
  - Chin Med J. 2023 Jun 30.
  - bioRxiv. 2023 Feb 5.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

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[1]. 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.

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

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

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