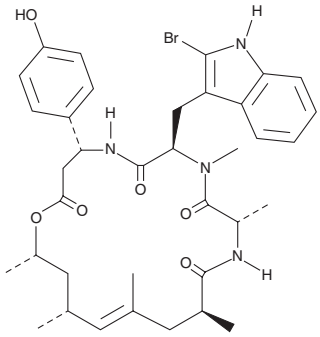
PRODUCT INFORMATION

Jasplakinolide

Item No. 11705

CAS Registry No.:	102396-24-7
Formal Name:	cyclo[(3R)-3-(4-hydroxyphenyl)-β-alanyl-8S-hydroxy-2S,4E,6R-trimethyl-4-nonenoyl-L-alanyl-2-bromo-N-methyl-D-tryptophyl]
Synonym:	NSC 613009
MF:	$C_{36}H_{45}BrN_4O_6$
FW:	709.7
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Animal/*Jaspis splendens*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Jasplakinolide is supplied as a solid. A stock solution may be made by dissolving the jasplakinolide in the solvent of choice, which should be purged with an inert gas. Jasplakinolide is soluble in ethanol, methanol, and DMSO.

Description

Jasplakinolide is a natural macrocyclic peptide first isolated from a marine sponge. It potently inhibits the proliferation of PC3 prostate carcinoma cells (IC_{50} = 35 nM) by binding F-actin (K_d = 15 nM).[1] This binding of jasplakinolide to actin, which is competitive with phalloidin, stabilizes actin filaments *in vitro* but disrupts actin filaments and induces irregular polymerization of monomeric actin *in vivo*.[1,2] This compound is used to investigate the role of actin in diverse cellular roles, such as motility, transport, and development.[3,4]

References

1. Bubb, M.R., Senderowicz, A.M.J., Sausville, E.A., *et al*. Jasplakinolide, a cytotoxic natural product, induces actin polymerization and competitively inhibits the binding of phalloidin to F-actin. *J. Biol. Chem*. **269(21)**, 14869-14871 (1994).
2. Bubb, M.R., Spector, I., Beyer, B.B., *et al*. Effects of jasplakinolide on the kinetics of actin polymerization. An explanation for certain *in vivo* observations. *J. Biol. Chem*. **275(7)**, 5163-5170 (2000).
3. Van Goor, D., Hyland, C., Schaefer, A.W., *et al*. The role of actin turnover in retrograde actin network flow in neuronal growth cones. *PLoS One* **7(2)**, (2012).
4. Zhang, X., Cui, X., Cheng, L., *et al*. Actin stabilization by jasplakinolide affects the function of bone marrow-derived late endothelial progenitor cells. *PLoS One* **7(11)**, (2012).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM