

**Product Name:** Borrelidin

**Catalog No.:** 4706

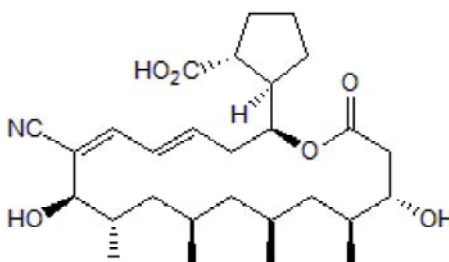
**Batch No.:** 4

CAS Number: 7184-60-3

IUPAC Name: (1*R*,2*R*)-2-[(2*S*,4*E*,6*Z*,8*R*,9*S*,11*R*,13*S*,15*S*,16*S*)-7-Cyano-8,16-dihydroxy-9,11,13,15-tetramethyl-18-oxooxacyclooctadeca-4,6-dien-2-yl]cyclopentanecarboxylic acid

## 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	C <sub>28</sub> H <sub>43</sub> NO <sub>6</sub>
<b>Batch Molecular Weight:</b>	489.64
<b>Physical Appearance:</b>	White solid
<b>Solubility:</b>	DMSO to 2 mM
<b>Storage:</b>	Store at -20°C
<b>Batch Molecular Structure:</b>	



## 2. ANALYTICAL DATA

<b>HPLC:</b>	Shows 97.8% purity
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Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel: +1 612 379 2956

**Product Name:** Borrelidin

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**Description:**

Borrelidin is an antibiotic and antiangiogenic. Selectively inhibits threonyl-tRNA synthetase (ThrRS). Exhibits antiangiogenic activity in a mouse model of tumor angiogenesis. Induces apoptosis in capillary tube-forming endothelial cells; disrupts capillary tubes and inhibits their formation (IC<sub>50</sub> = 0.8 nM in rat aorta). Induces the unfolded protein response (UPR) and apoptosis in oral cancer cells.

**Physical and Chemical Properties:**

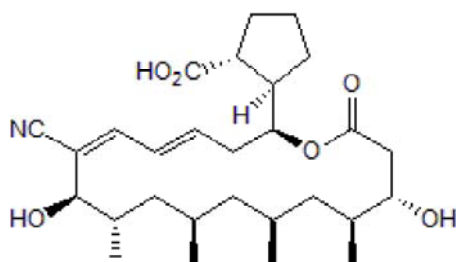
Batch Molecular Formula: C<sub>28</sub>H<sub>43</sub>NO<sub>6</sub>

Batch Molecular Weight: 489.64

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**References:**

**Sidhu et al** (2015) Borrelidin induces the unfolded protein response in oral cancer cells and Chop-dependent apoptosis. *ACS Med.Chem.Lett.* **6** 1122. PMID: 26617965.

**Woolard et al** (2011) Borrelidin modulates the alternative splicing of VEGF in favour of anti-angiogenic isoforms. *Chem.Sci.* (2) 273. PMID: 22822423.

**Kawamura et al** (2003) Anti-angiogenesis effect of borrelidin are mediated through distinct pathways: threonyl-tRNA synthetase and caspases are independently involved in suppression of proliferation and induction of apoptosis in endothelial cells. *J.Antibiot.(Tokyo)*. **56** 709. PMID: 14563161.

**Storage:** Store at -20°C

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

DMSO to 2 mM

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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