

Product Name: Bafilomycin A1

Catalog No.: 1334

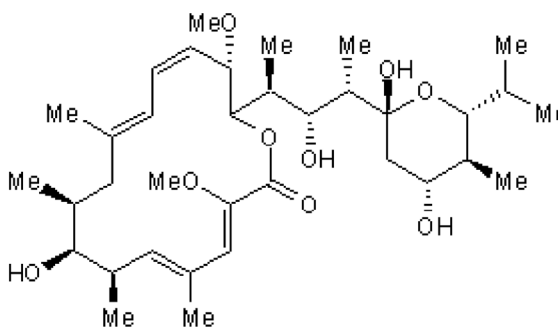
Batch No.: 20

CAS Number: 88899-55-2

IUPAC Name: (3Z,5E,7R,8S,9S,11E,13E,15S,16R)-8-Hydroxy-16-[(1S,2R,3S)-2-hydroxy-1-methyl-3-[(2R,4R,5S,6R)-tetrahydro-2,4-dihydroxy-5-methyl-6-(1-methylethyl)-2H-pyran-2-yl]butyl]-3,15-dimethoxy-5,7,9,11-tetramethoxycyclohexadeca-3,5,11,13-tetraen-2-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₅H₅₈O₉
Batch Molecular Weight: 622.84
Physical Appearance: White solid
Solubility: DMSO to 5 mg/ml
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.4% purity

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Bafilomycin A1 is a highly potent, selective inhibitor of vacuolar H⁺-ATPases (IC₅₀ = 0.6 - 1.5 nM in bovine chromaffin granules). Selective for v-ATPase over other ATP hydrolyzing enzymes such as F-ATPases and the H⁺/K⁺-ATPase (P-ATPase). Thought to inhibit autophagy either by blocking autophagosome-lysosome fusion (in H4IIE cells), or by blocking lysosomal degradation. Bafilomycin A1 accelerates wound healing in db/db mice. Low dose Bafilomycin A1 attenuates patient-derived CD34+CD19+ leukemia stem cells (LSC) and inhibits LSC proliferation in an animal model. Bafilomycin A1 impairs Zika virus infection *in vitro*. Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

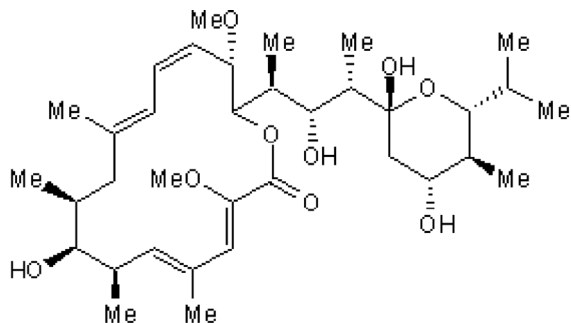
Batch Molecular Formula: C₃₅H₅₈O₉

Batch Molecular Weight: 622.84

Physical Appearance: White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



References:

Wang et al (2020) Bafilomycin A1 accelerates chronic refractory wound healing in db/db mice. *Biomed.Res.Int.* 6265701. PMID: 32714982.

Xu et al (2020) Bafilomycin A1 targets patient-derived CD34 + CD19 + leukemia stem cells. *Haematologica* **105** e17. PMID: 31097633.

Sabino et al (2019) Bafilomycin A1 and U18666A efficiently impair ZIKV infection *in vitro*. *Viruses* **11** 524. PMID: 31174294.

Storage: Store at -20°C. This product is packaged under an inert atmosphere.

Solubility & Usage Info:

DMSO to 5 mg/ml

Avoid freeze-thaw cycles of this product; it is recommended that aliquots of stock solutions be thawed only once, immediately before use. Huss *et al* (2005) Archazolid and apicularen: Novel specific V-ATPase inhibitors. *BMC Biochemistry* 6 13. This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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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