

Product Name: Brefeldin A

Catalog No.: 1231

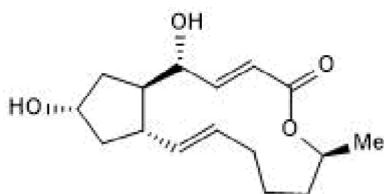
Batch No.: 8

CAS Number: 20350-15-6

IUPAC Name: 1,6,7,8,9,11aβ,12,13,14,14aα-Decahydro-1β,13α-dihydroxy-6β-methyl-4*H*-cyclopent[*f*]oxacyclotridecin-4-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆H₂₄O₄.
Batch Molecular Weight: 280.36
Physical Appearance: White solid
Solubility: DMSO to 50 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.5% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	68.55	8.63	
Found	68.41	8.75	

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

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IUPAC Name: 1,6,7,8,9,11a β ,12,13,14,14a α -Decahydro-1 β ,13 α -dihydroxy-6 β -methyl-4*H*-cyclopent[*f*]oxacyclotridecin-4-one

Description:

Brefeldin A is a reversible inhibitor of protein translocation from the endoplasmic reticulum (ER) to the Golgi apparatus. Blocks binding of ADP-ribosylation factor (ARF1) to the Golgi apparatus and inhibits GDP-GTP exchange, leading to activation of ER stress signaling pathways. Can be used to induce autophagy in mammalian cells. Also enhances CRISPR-mediated homology-directed repair (HDR) efficiency ~2-fold when applied at 100 nM, in human induced pluripotent stem cells (iPSCs). Antifungal.

Physical and Chemical Properties:

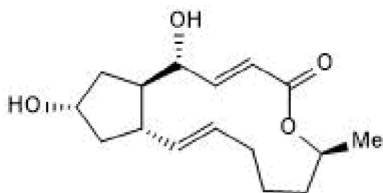
Batch Molecular Formula: C₁₆H₂₄O₄.

Batch Molecular Weight: 280.36

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Yu *et al* (2015) Small molecules enhance CRISPR genome editing in pluripotent stem cells. *Cell Stem Cell* **16** 142. PMID: 25658371.

Ding *et al* (2007) Differential effects of endoplasmic reticulum stress-induced autophagy on cell survival. *J.Biol.Chem.* **282** 4702. PMID: 17135238.

Morinaga *et al* (1996) Isolation of a brefeldin A-inhibited guanine nucleotide-exchange protein for ADP ribosylation factor (ARF)1 and ARF3 that contains a Sec7-like domain. *Proc.Natl.Acad.Sci.U.S.A.* **93** 12856. PMID: 8917509.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 50 mM

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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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