

Product Name: (5Z)-7-Oxozeaenol

Catalog No.: 3604

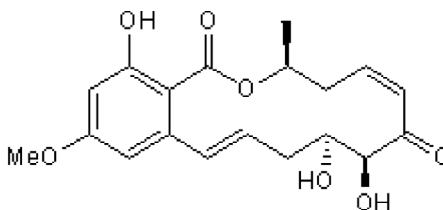
Batch No.: 4

CAS Number: 253863-19-3

IUPAC Name: (3S,5Z,8S,9S,11E)-3,4,9,10-tetrahydro-8,9,16-trihydroxy-14-methoxy-3-methyl-1H-2-benzoxacyclotetradecin-1,7(8H)-dione

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₁₉ H ₂₂ O ₇
Batch Molecular Weight:	362.37
Physical Appearance:	White solid
Solubility:	DMSO to 25 mM
Storage:	Desiccate at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 99.05% purity
¹ H NMR:	Consistent with structure
Mass Spectrum:	Consistent with structure

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

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Description:

(5Z)-7-Oxozeaenol is a resorcylic lactone of fungal origin that acts as a potent and selective transforming growth factor- β -activated kinase 1 (TAK1) mitogen-activated protein kinase kinase kinase (MAPKKK) inhibitor (IC_{50} = 8 nM). Displays > 33-fold and > 62-fold selectivity over MEKK1 and MEKK4 respectively. Inhibits IL-1-induced activation of NF- κ B (IC_{50} = 83 nM) and JNK/p38. Inhibits production of inflammatory mediators, and sensitizes cells to TRAIL- and TNF- α -induced apoptosis in vitro.

Physical and Chemical Properties:

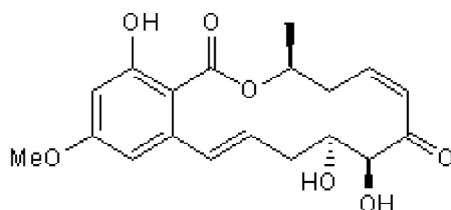
Batch Molecular Formula: C₁₉H₂₂O₇

Batch Molecular Weight: 362.37

Physical Appearance: White solid

Minimum Purity: \geq 98%

Batch Molecular Structure:



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

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 25 mM

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.

References:

Windheim et al (2007) Molecular mechanisms involved in the regulation of cytokine production by muramyl dipeptide. *Biochem.J.* **404** 179. PMID: 17348859.

Choo et al (2006) Blockade of transforming growth factor- β -activated kinase 1 activity enhances TRAIL-induced apoptosis through activation of a caspase cascade. *Mol.Cancer Ther.* **5** 2970. PMID: 17172402.

Ninomiya-Tsuji et al (2003) A resorcylic acid lactone, 5Z-7-Oxozeaenol, prevents inflammation by inhibiting the catalytic activity of TAK1 MAPK kinase kinase. *J.Biol.Chem.* **278** 18485. PMID: 12624112.

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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