

Product Name: PEP 005

Catalog No.: 4054

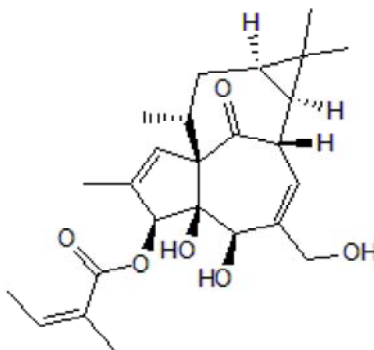
Batch No.: 3

CAS Number: 75567-37-2

IUPAC Name: (2Z)-2-Methyl-2-butenoic acid (1aR,2S,5R,5aS,6S,8aS,9R,10aR)-1a,2,5,5a,6,9,10,10a-octahydro-5,5a-dihydroxy-4-(hydroxymethyl)-1,1,7,9-tetramethyl-11-oxo-1H-2,8a-methanocyclopenta[a]cyclopropa[e]cyclodecen-6-yl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₂₅ H ₃₄ O ₆
Batch Molecular Weight:	430.53
Physical Appearance:	White solid
Solubility:	DMSO to 2 mM
Storage:	Store at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 99.3% purity
Mass Spectrum:	Consistent with structure

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

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Product Name: PEP 005

Catalog No.: 4054

Batch No.: 3

CAS Number: 75567-37-2

IUPAC Name: (2Z)-2-Methyl-2-buten-1-yl 2,5,6,8,9,10-hexahydro-11-oxo-1H-2,8a-methanocyclopenta[a]cyclopropa[e]cyclodecen-6-yl ester

Description:

Activator of protein kinase C (PKC). Exhibits antileukemic activity; induces nuclear translocation of PKC δ , and induces apoptosis in acute myeloid leukemia (AML) cell lines and primary AML blast cells. Also displays antiproliferative effects and induces apoptosis in Colo205 cells. Reactivates latent HIV in cell culture. Also reactivates hypofunctional CD8⁺ T cells with persistent virus infection. Acts as a substrate for multidrug transporter.

Physical and Chemical Properties:

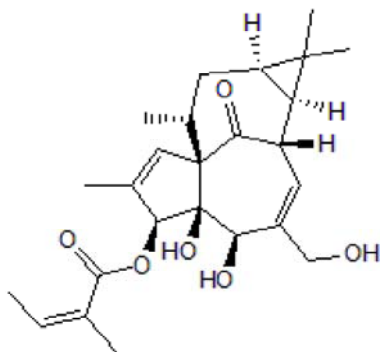
Batch Molecular Formula: C₂₅H₃₄O₆

Batch Molecular Weight: 430.53

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

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.

References:

Marro *et al* (2019) Discovery of small molecules for the reversal of T cell exhaustion. *Cell Rep.* **29** 3293. PMID: 31801090.

Jiang *et al* (2015) Synergistic reactivation of latent HIV expression by Ingenol-3-Angelate, PEP005, targeted NF- κ B signaling in combination with JQ1 induced p-TEFb activation. *PLoS Pathog.* **11** e1005066. PMID: 26225771.

Li *et al* (2010) The skin cancer chemotherapeutic agent ingenol-3-angelate (PEP005) is a substrate for the epidermal multidrug transporter (ABCB1) and targets tumor vasculature. *Cancer Res.* **70** 4509. PMID: 20460505.

Benhadji *et al* (2008) Antiproliferative activity of PEP005, a novel ingenol angelate that modulates PKC functions, alone and in combination with cytotoxic agents in human colon cancer cells. *Br.J.Cancer* **99** 1808. PMID: 19034280.

Hampson *et al* (2005) PEP005, a selective small-molecule activator of protein kinase C, has potent antileukemic activity mediated via the delta isoform of PKC. *Blood* **106** 1362. PMID: 15845901.

Kedei *et al* (2004) Characterization of the interaction of ingenol-3-angelate with protein kinase C. *Cancer Res.* **64** 3243. PMID: 15126366.

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