

Product Data Sheet

Product Name: Bryostatin 1

Cat. No.: GC17670

Chemical Properties

Cas. No. 83314-01-6

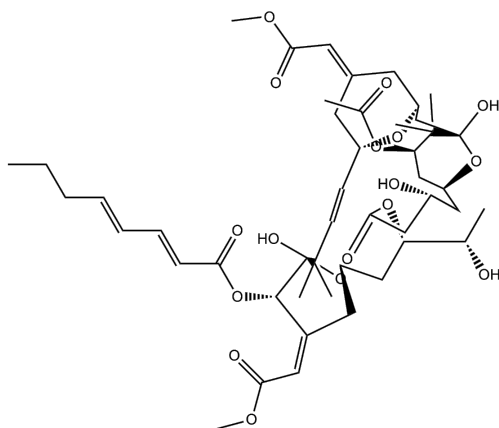
Formula $C_{47}H_{68}O_{17}$ M.Wt 905.04

Solubility DMSO : 50 mg/mL (55.25 mM; Need ultrasonic and warming) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

Bryostatin 1 is an activator of protein kinase C (PKC) [1].

PKC is a monomeric Ca^{2+} - and phospholipid-dependent Ser/Thr protein kinase and plays an important role in growth factor-activated signaling and malignant transformation.

Bryostatin 1 is a PKC activator. In 3T3 cells, bryostatin 1 stimulated ornithine decarboxylase (ODC) activity in a dose-dependent way [1]. In HL-60 cells, bryostatin 1 induced protein kinase C translocated from the cytosolic to membrane. Bryostatin 1 (10 nM) induced monocytic differentiation and partially inhibited proliferation. Also, bryostatin 1 (10 nM) reduced the expression of c-myc and

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induced c-fos, c-fms and tumor necrosis factor transcripts [2].

In SENCAR mouse, bryostatin 1 caused [3H]TdR incorporation into epidermal DNA and induced epidermal hyperplasia in a dose-dependent way. Also, bryostatin 1 stimulated alkaline phosphatase activity in the epidermis and significantly reduced the tumor incidence [1]. In a B16 melanoma pulmonary metastases mice model, bryostatin 1 significantly reduced the number of lung nodules. Bryostatin 1 inhibited the generation of interleukin 2 by lymphokine-activated killer cells and also inhibited natural killer cell activity [3].

References:

- [1]. Gschwendt M, Fürstenberger G, Rose-John S, et al. Bryostatin 1, an activator of protein kinase C, mimics as well as inhibits biological effects of the phorbol ester TPA in vivo and in vitro. Carcinogenesis, 1988, 9(4): 555-562.
- [2]. Stone RM, Sariban E, Pettit GR, et al. Bryostatin 1 activates protein kinase C and induces monocytic differentiation of HL-60 cells. Blood, 1988, 72(1): 208-213.
- [3]. Schuchter LM, Esa AH, May S, et al. Successful treatment of murine melanoma with bryostatin 1. Cancer Res, 1991, 51(2): 682-687.

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