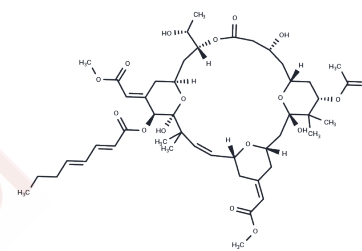


Bryostatin 1

Chemical Properties

CAS No. :	83314-01-6
Formula:	C47H68O17
Molecular Weight:	905.03
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Bryostatin 1 is a natural macrolide isolated from the bryozoan Bugula neritina and is a CNS-permeable PKC modulator. Bryostatin 1 binds to the isolated C1 domain of Munc13-1 and the full-length Munc13-1 protein [Kis: 8.07 nM and 0.45 nM].
Targets(IC50)	HIV Protease, Antibacterial, PKC
In vitro	Bryostatin 1 (1 μM; 5 minutes; HT22 cells) treatment successfully recruits Munc13-1 from the cytosol to the plasma membrane. Effects of Bryostatin 1 on the other Munc13 family members, ubMunc13-2 and bMunc13-2, resembled those of Munc13-1 for translocation. The increased level of expression of Munc13-1 following a 24 h incubation with Bryostatin 1 in both HT22 and primary mouse hippocampal cells is observed [1]. Bryostatin 1 can also affect the immune system by modulating dendritic cells (DCs) via TLR4 through the MyD88-independent pathway which favors an anti-inflammatory environment by inducing a type 2 phenotype that promotes the differentiation of CD4+ T-helper (Th) lymphocytes into Th2 versus Th1 effector cells [2].
In vivo	Bryostatin 1 (30 μg/kg; i.p.; 3 days per week; for 2 weeks) treatment completely prevents the onset of EAE [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.1049 mL	5.5247 mL	11.0494 mL
5 mM	0.221 mL	1.1049 mL	2.2099 mL
10 mM	0.1105 mL	0.5525 mL	1.1049 mL
50 mM	0.0221 mL	0.1105 mL	0.221 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Blanco FA, et al. Munc13 Is a Molecular Target of Bryostatin 1. *Biochemistry*. 2019 Jul 9;58(27):3016-3030.

Kornberg MD, et al. Bryostatin-1 alleviates experimental multiple sclerosis. *Proc Natl Acad Sci U S A*. 2018 Feb 27; 115(9):2186-2191.

Zeng N, et al. Bryostatin 1 causes attenuation of TPA-mediated tumor promotion in mouse skin. *Mol Med Rep*. 2018 Jan; 17(1):1077-1082.

Proust A, et al. HIV-1 infection and latency-reversing agents bryostatin-1 and JQ1 disrupt amyloid beta homeostasis in human astrocytes. *Glia*. 2020 Apr 6.

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