Product Data Sheet

Product Name: Acetyl Podocarpic Acid Anhydride
Cat. No.: GC17059

Chemical Properties

Cas. No.	344327-48-6		
Chemical Name	6-(acetyloxy)-1,2,3,4,4a,9,10,10a-octahydro-1,4a-dimethyl-1-phenanthrenecarboxylic acid, anhydride		
SMILES	CC(=O)Oc1ccc2CC[C@H]3[C@](C)(CCC[C@]3(C)c2c1)[C@@H](=O)O[C@H](=O)[C@@]1(C)CCC[C@]2(C)c3cc(ccc3CC[C@@H]12)OC(=O)C		
Formula	$C_{38}H_{46}O_7$	M.Wt	614.8
Solubility	≤1mg/ml in dimethyl formamide	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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

Target: LXR

ED50: 1 nM

Acetyl podocarpic acid anhydride (APD) is a kind of potent, semi-synthetic agonist of liver X receptor (LXR), which was derived from the extracts of the mayapple [1].

The liver X receptor is a member of the nuclear receptor family of transcription factors and is closely related to nuclear receptors such as the farnesoid X receptor (FXR), Peroxisome proliferator-activated receptor (PPARs) and retinoid X receptor (RXR). LXRs are key regulators involved in fatty acid, cholesterol, and glucose homeostasis. APD could inhibit the overall absorption of cholesterol by increasing the efflux of cholesterol from enterocytes, with the ED50 value of 1 nM [2].

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In Vitro: In a cell-free assay of receptor activation, APD could cause LXR to bind to SRC-1, with a much more potentiality than 22-(R)-hydroxycholesterol. Besides, in THP-1 human primary hepatocytes, and Caco-2 cells, APD could significantly increase the mRNA level of ABCA1, which was regulated by LXR [2].

In Vivo: no data available.

Clinical trial: no data available.

References:
[1] Costet P, Luo Y, Wang N, et al. Sterol-dependent Transactivation of theABC1 Promoter by the Liver X Receptor/Retinoid X Receptor[J]. Journal of Biological Chemistry, 2000, 275(36): 28240-28245.
[2] Sparrow C P, Baffic J, Lam M, et al. A potent synthetic LXR agonist is more effective than cholesterol-loading at inducing ABCA1 mRNA and stimulating cholesterol efflux[J]. Journal of Biological Chemistry, 2002, 277(12): 10021-10027.

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