Product Data Sheet

Product Name: Celastramycin A
Cat. No.: GC14356

Chemical Properties

Cas. No.	491600-94-3		
Chemical Name	(3-chloro-5-hexyl-2,6-dihydroxyphenyl)(4,5-dichloro-1H-pyrrol-3-yl)-methanone		
SMILES	ClC1=CC(CCCCCC)=C(O)C(C(C2=CC(Cl)=C(Cl)N2)=O)=C1O		
Formula	$C_{17}H_{18}Cl_3NO_3$	M.Wt	390.7
Solubility	≤20mg/ml in ethanol;20mg/ml in DMSO;20mg/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	Celastramycin A		

Background

Celastramycin A is an antibiotic that inhibits the growth of bacteria and mycobacteria and is also a potent innate immune suppressor [1][2].

Celastramycin A is a benzoyl pyrrole-type compound isolated from endophytic bacteria Streptomyces MaB-QuH-8 living in plants of the Celastraceae family. Celastramycin A exhibited high activity against a series of multiresistent bacteria and mycobacteria [1]. Celastramycin A inhibited the growth of Gram-positive bacteria and mycobacteria with minimal inhibitory concentration (MIC) as low as 0.05 μg/ml [1]. In the ex vivo Drosophila culture system, Celastramycin A showed a potent immunosuppressive effect with IC50 value of 0.008 μg/mL. In human umbilical vein endothelial cells (HUVECs), Celastramycin A potently inhibited the production of IL-8 with IC50 value of 0.06 μg/mL. So Celastramycin A could be used as a lead compound for novel immunosuppressive agents [2].

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References:
[1]. Pullen C, Schmitz P, Meurer K, et al. New and bioactive compounds from Streptomyces strains residing in the wood of Celastraceae. Planta. 2002 Nov;216(1):162-7.
[2]. Kikuchi H, Sekiya M, Katou Y, et al. Revised structure and synthesis of celastramycin a, a potent innate immune suppressor. Org Lett. 2009 Apr 16;11(8):1693-5.

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