Product Data Sheet

Product Name: Equisetin
Cat. No.: GC10572

Chemical Properties

Cas. No.	57749-43-6		
Chemical Name	(3E,5S)-5-(hydroxymethyl)-3-[hydroxy[(1S,2R,4aS,6R,8aR)-1,2,4a,5,6,7,8,8a-octahydro-1,6-dimethyl-2-(1E)-1-propen-1-yl-1-naphthalenyl]methylene]-1-methyl-2,4-pyrrolidinedione		
SMILES	C/C=C/[C@H](C=C1)[C@](/C(O)=C2C([C@H](CO)N(C)C/2=O)=O)(C)[C@@]3([H])[C@@]1([H])C[C@H](C)CC3		
Formula	$C_{22}H_{31}NO_4$	M.Wt	373.5
Solubility	Soluble in DMSO;Soluble 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	Equisetin		

Background

Equisetin is an N-methylserine-derived acyl tetramic acid isolated from a terrestrial fungus Fusarium equiseti NRRL 5537[1]. Equisetin is a tetramate-containing natural product with antibiotic and cytotoxic activity[2]. Equisetin inhibits the growth of Gram-positive bacteria and HIV-1 integrase activity but shows no activity against Gram-negative bacteria[3]. Equisetin is a Quorum-sensing inhibitor (QSI) that attenuates QS-regulated virulence phenotypes in P. aeruginosa without affecting the growth of bacterias, serves as a leading compound for the treatment of P. aeruginosa infections[4].

References:
[1]. Burmeister HR, et al. Antibiotic produced by Fusarium equiseti NRRL 5537. Antimicrob Agents Chemother. 1974 Jun;5(6):634-9.

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[2]. Vesonder RF, et al. Equisetin, an antibiotic from Fusarium equiseti NRRL 5537, identified as a derivative of N-methyl-2, 4-pyrollidone. J Antibiot (Tokyo). 1979 Jul;32(7):759-61.
[3]. Lee J, et al. The hierarchy quorum sensing network in Pseudomonas aeruginosa. Protein Cell. 2015 Jan;6(1):26-41.
[4]. Zhang M, et al. Equisetin as potential quorum sensing inhibitor of Pseudomonas aeruginosa. Biotechnol Lett. 2018 May;40(5):865-870.

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