Product Data Sheet

Product Name: Tetrahydromagnolol
Cat. No.: GC15327

Chemical Properties

Cas. No.	20601-85-8		
Chemical Name	5,5'-dipropyl-[1,1'-biphenyl]-2,2'-diol		
SMILES	OC(C=CC(CCC)=C1)=C1C2=CC(CCC)=CC=C2O		
Formula	$C_{18}H_{22}O_2$	M.Wt	270.4
Solubility	≤20mg/ml in ethanol;16mg/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	Tetrahydromagnolol		

Background

Tetrahydromagnolol is a major metabolite of magnolol and acts as a peripheral CB2 receptor agonist. Tetrahydromagnolol also acts as an antagonist at GPR55 [1].

Cannabinoid (CB) receptors belong to the G protein-coupled receptor (GPCR) superfamily and are divided into CB1 and CB2. CB1 activation mediates analgesia, stimulation of appetite, and euphoria, among other effects. CB2 receptor activation results in analgesic and antiinflammatory effects. GPR55, a CB-related orphan receptor, is reported to interact with certain CBs [1].

Tetrahydromagnolol is a highly selective peripheral CB2 receptor agonist that is 19-fold more potent than magnolol with EC50 and Ki values of 0.17 μM and 0.42 μM, respectively. Magnolol is a bioactive compound isolated from the bark of Magnolia officinalis that is used in Asian traditional medicine for the treatment of anxiety, sleeping disorders, and allergic diseases. Magnolol behaved as a partial agonist with selectivity

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for the CB2 subtype (EC50 = 3.28 μM; Ki = 1.44 μM). In β-arrestin translocation assay, Tetrahydromagnolol inhibited LPI-induced GPR55 activation with KB value of 13.3 μM [1].

Reference:

[1]. Rempel V, Fuchs A, Hinz S, et al. Magnolia Extract, Magnolol, and Metabolites: Activation of Cannabinoid CB2 Receptors and Blockade of the Related GPR55. ACS Med Chem Lett. 2012 Nov 14;4(1):41-5.

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