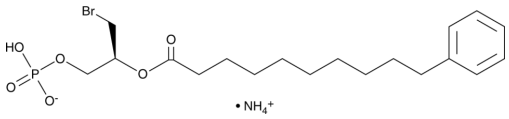
Product Data Sheet

Product Name: UCM-05194 (ammonium salt)
Cat. No.: GC92028

Chemical Properties

Cas. No.			
Chemical Name	benzenedecanoic acid, (1S)-1-(bromomethyl)-2-(phosphonooxy)ethyl ester, monoammonium salt		
SMILES	O=C(CCCCCCCCCC1=CC=CC=C1)O[C@@H](COP(O)([O-])=O)CBr.[NH4+]		
Formula	$C_{19}H_{29}BrO_6P$? NH_4	M.Wt	482.4
Solubility	DMSO: Soluble,Ethanol: Slightly soluble,Water: Soluble	Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C 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

UCM-05194 is an agonist of lysophosphatidic acid receptor 1 (LPA_1).[1] It induces calcium mobilization in RH7777 cells expressing LPA_1 (EC_{50} = 0.24 ?M). It is selective for LPA_1 over LPA_2 and LPA_3 at 10 ?M and is 10-fold selective over LPA_5 and 50-fold selective over LPA_4, LPA_6, and autotaxin. UCM-05194 (1 ?M) induces neurite retraction in, and migration of, B103 rat neuroblastoma cells overexpressing LPA_1. It induces receptor internalization and neuronal desensitization in the same cells when used at a concentration of 1 ?M and reduces the firing activity of primary rat neonatal dorsal root ganglia (DRG) neurons with repeated application at 10 ?M. UCM-05194 (10 mg/kg) reduces acetic acid-induced writhing and hind paw mechanical hypersensitivity in mice.

References:

[1]. González-Gil, I., Zian, D., Vázquez-Villa, H., et al.A novel agonist of the type 1 lysophosphatidic

acid receptor (LPA1), UCM-05194, shows efficacy in neuropathic pain ameliorationJ. Med. Chem.63(5)2372-2390(2020).