Product Data Sheet

Product Name: R-1 Methanandamide Phosphate
Cat. No.: GC14177

Chemical Properties

Cas. No.	649569-33-5		
Chemical Name	N-(2-phosphate-1R-methylethyl)-5Z,8Z,11Z,14Z-eicosatetraenamide		
SMILES	CCCCC/C=C\C/C=C\C/C=C\C/C=C\CCCC(N([H])[C@H](C)COP(O)(O)=O)=O		
Formula	$C_{23}H_{40}NO_5P$	M.Wt	441.5
Solubility	≤15mg/ml in DMSO;15mg/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

R-1 Methanandamide Phosphate,a water soluble prodrug analog of AEA, exhibited similar activity to that of AEA in the growth inhibition of C6 glioma cells[1].

Arachidonoyl ethanolamide (AEA) was the first endogenous cannabinoid (CB). AEA has been isolated and characterized as an agonist acting on the receptors CB1 and CB2 [2,3]. Since then, several related endocannabinoids have been isolated, most notably was 2-arachidonoyl glycerol (2-AG). The phosphate ester of R-1 methanandamide, R-1MAP, has been tested as a water soluble prodrug analog of AEA [4]. The activity of R-1MAP was essentially equivalent to that of AEA in inhibiting the growth of C6 glioma cells. However, when tested for the inhibitory effects of AEA binding to the isolated rat brain CB1 receptors, arachidonoyl ethanolamide phosphate (AEA-P) has shown about 5-fold less potent as an agonist with a Ki value of about 200 nM [5]. In normotensive Dutch Belted rabbits of either gender, the phosphate ester of R-methanandamide reduced intraocular pressure (IOP) [1].

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

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References:
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