Product Data Sheet

Product Name: S-2 Methanandamide
Cat. No.: GC12868

Chemical Properties

Cas. No.	157182-48-4		
Chemical Name	N-(2S-hydroxypropyl)-5Z,8Z,11Z,14Z-eicosatetraenamide		
SMILES	CCCCC/C=C\C/C=C\C/C=C\C/C=C\CCCC(=O)NCC(C)O		
Formula	$C_{23}H_{39}NO_2$	M.Wt	361.6
Solubility	≤10mg/ml in DMSO;10mg/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	S-2 Methanandamide		

Background

S-2 methanandamide is a CB1 receptor ligand.

The cannabinoid receptor type 1 (CB1), is a G protein-coupled cannabinoid receptor located mainly in the central and peripheral nervous system. CB1 is also expressed in several cells relating to metabolism, such as muscle cells, fat cells, liver cells, and the digestive tract. The CB1 receptor has been involved in the maintenance of homeostasis in health and disease, preventing the development of excessive neuronal activity, reducing pain and other inflammatory symptoms. Enhanced receptor expression has been identified in human hepatocellular carcinoma tumor samples and human prostate cancer cells [2].

S-2 methanandamide was the second most potent CB1 receptor agonist in the methanandamide series. S-2 methanandamide activated the CB1 receptor with a Ki value of 26 nM. S-2 methanandamide was less prone to FAAH inactivation. S-2 methanandamide inhibited the murine vas deferens twitch response with an IC50 value

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of 47 nM.

References:
[1] Abadji V, Lin S, Taha G, et al. (R)-methanandamide: a chiral novel anandamide possessing higher potency and metabolic stability[J]. Journal of medicinal chemistry, 1994, 37(12): 1889-1893.
[2] Howlett A C. Cannabinoid receptor signaling[M]//Cannabinoids. Springer Berlin Heidelberg, 2005: 53-79.