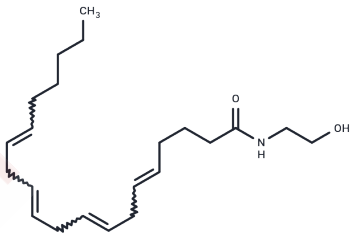
Data Sheet (Cat.No.T14046)

TargetMol

Anandamide

Chemical Properties



CAS No. :	94421-68-8
Formula:	C22H37NO2
Molecular Weight:	347.53
Appearance:	no data available
Storage:	store at low temperature Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Anandamide ((5Z,8Z,11Z,14Z)-N-(2-Hydroxyethyl)icosa-5,8,11,14-tetraenamide), an immune modulator, acts via not only cannabinoid receptors (CB1 and CB2) but also other targets (e.g., GPR18/GPR55) in the central nervous system.
Targets(IC50)	Cannabinoid Receptor,Endogenous Metabolite
In vitro	Anandamide, acting via CB2 receptors, alleviates lipopolysaccharide (LPS)-induced neuroinflammation in rat primary microglial cultures. Endocannabinoids, especially Anandamide (AEA), can activate numerous other receptors like PPARS, TRPV1, and GPR18/GPR55 [1].
In vivo	Anandamide is an endocannabinoid binding both CB1R and CB2R. To evaluate the impact of CBR activation on whole-body glucose homeostasis, glucose tolerance is assessed after a single intraperitoneal Anandamide injection (10 mg/kg). The increase in glycemia in response to glucose ingestion is considerably smaller in mice treated with Anandamide compared with control. It is associated with an improvement of glucose tolerance as illustrated by the AUC0-2h calculations[2].

Solubility Information

Solubility	Ethanol: 10 mg/mL (28.77 mM),Sonication is recommended. DMSO: 55 mg/mL (158.26 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8774 mL	14.3872 mL	28.7745 mL
5 mM	0.5755 mL	2.8774 mL	5.7549 mL
10 mM	0.2877 mL	1.4387 mL	2.8774 mL
50 mM	0.0575 mL	0.2877 mL	0.5755 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Malek N, et al. Anandamide, Acting via CB2 Receptors, Alleviates LPS-Induced Neuroinflammation in Rat Primary Microglial Cultures. Neural Plast. 2015;2015:130639.
Troy-Fioramonti S, et al. Acute activation of cannabinoid receptors by Anandamide reduces gastrointestinal motility and improves postprandial glycemia in mice. Diabetes. 2015 Mar;64(3):808-18.