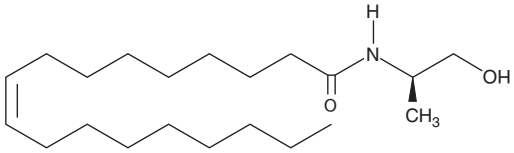
Product Information

AM3102

Item No. 13452

CAS Registry No.: 213182-22-0
Formal Name: N-[(1R)-2-hydroxy-1-methylethyl-9Z-octadecenamide
Synonym: KDS-5104
MF: $C_{21}H_{41}NO_2$
FW: 339.6
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that AM3102 be stored as supplied at -20°C. It should be stable for at least two years.

AM3102 is supplied as a crystalline solid. A stock solution may be made by dissolving the AM3102 in an organic solvent purged with an inert gas. AM3102 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of AM3102 in ethanol is approximately 5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Oleoyl ethanolamide (OEA) is an endogenous agonist for peroxisome proliferator-activated receptor α (PPARα) that suppresses food intake, promotes lipolysis, and reduces weight gain in rodents. The biological effects of OEA are terminated by fatty-acid amide hydrolase and N-acylethanolamine-hydrolyzing acid amidase. AM3102 is an OEA analog that stimulates PPARα transcriptional activity with an EC_{50} value of 100 nM and prolongs feeding latency in rodents with an ED_{50} value of 2.4 mg/kg.[1] It is resistant to enzymatic hydrolysis and is as potent as OEA in enhancing transcriptional activity of PPARα and reducing food intake in free-feeding rats.[1,2] AM3102 demonstrates weak affinity for the central cannabinoid (CB_1) and peripheral cannabinoid (CB_2) receptors with K_i values of 33 and 26 µM, respectively.[3]

References

1. Astarita, G., Di Giacomo, B., Gaetani, S., *et al.* Pharmacological characterization of hydrolysis-resistant analogs of oleoylethanolamide with potent anorexiant properties. *J. Pharmacol. Exp. Ther.* **318(2)**, 563-570 (2006).
2. Wang, J. and Ueda, N. Role of the endocannabinoid system in metabolic control. *Curr. Opin. Nephrol. Hypertens.* **17**, 1-10 (2008).
3. Lin, S., Khanolkar, A.D., Fan, P., *et al.* Novel analogues of arachidonylethanolamide (anandamide): Affinities for the CB_1 and CB_2 cannabinoid receptors and metabolic stability. *J. Med. Chem.* **41**, 5353-5361 (1998).

Related Products

AM2201-d_5 - Item No. 10706 • AM2201 - Item No. 10707 • N-Oleoyl-L-Serine - Item No. 13058 • Oleoyl Ethanolamide - Item No. 90265

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