

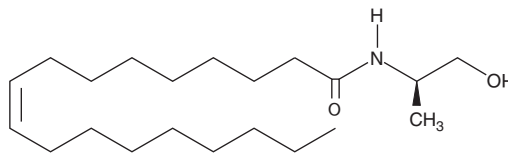
# Product Information



## 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<sub>21</sub>H<sub>41</sub>NO<sub>2</sub>  
**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  $\alpha$  (PPAR $\alpha$ ) 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-acyl ethanolamine-hydrolyzing acid amidase. AM3102 is an OEA analog that stimulates PPAR $\alpha$  transcriptional activity with an EC<sub>50</sub> value of 100 nM and prolongs feeding latency in rodents with an ED<sub>50</sub> value of 2.4 mg/kg.<sup>1</sup> It is resistant to enzymatic hydrolysis and is as potent as OEA in enhancing transcriptional activity of PPAR $\alpha$  and reducing food intake in free-feeding rats.<sup>1,2</sup> AM3102 demonstrates weak affinity for the central cannabinoid (CB<sub>1</sub>) and peripheral cannabinoid (CB<sub>2</sub>) receptors with K<sub>i</sub> values of 33 and 26  $\mu$ M, respectively.<sup>3</sup>

### 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<sub>1</sub> and CB<sub>2</sub> cannabinoid receptors and metabolic stability. *J. Med. Chem.* **41**, 5353-5361 (1998).

### Related Products

AM2201-d<sub>5</sub> - Item No. 10706 • AM2201 - Item No. 10707 • N-Oleoyl-L-Serine - Item No. 13058 • Oleoyl Ethanolamide - Item No. 90265

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

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