

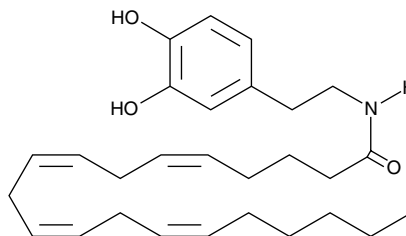
Product Information



N-Arachidonoyl Dopamine

Item No. 90057

CAS Registry No.: 199875-69-9
Formal Name: N-[2,3-(4-dihydroxyphenyl)ethyl]-5Z,8Z,11Z,14Z-eicosatetraenamide
Synonym: NADA
MF: C₂₈H₄₁NO₃
FW: 439.6
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol
UV/Vis.: λ_{max}: 211, 284 nm



Laboratory Procedures

For long term storage, we suggest that N-arachidonoyl dopamine (NADA) be stored as supplied at -20°C. It will be stable for at least one year.

NADA is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. NADA is miscible in these solvents.

NADA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of NADA should be diluted with the aqueous buffer of choice. NADA has a solubility of 100 µg/ml as a colloidal suspension in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Several different arachidonoyl amino acids, including NADA, have been isolated and characterized from bovine brain.¹ NADA is the amide of the neurotransmitter dopamine and arachidonic acid. NADA is a CB₁-selective cannabinoid agonist, inducing the typical tetrad of hypothermia, analgesia, catalepsy, and hypomotility in rats which exceeds that of anandamide (AEA).² NADA is a full agonist at the vanilloid receptor 1, but is inactive on the dopaminergic D1 and D2 receptors. NADA is also a potent inhibitor (IC₅₀ = 0.25 µM) of the proliferation of MCF-7 breast carcinoma cells. Recent reports of NADA's endothelium-dependent vasodilation indicate that some of its cannabinergic activities antagonized by SR141716A may be non-CB₁/CB₂ dependent.³

References

- Huang, S.M., Bisogno, T., Petros, T.J., *et al.* Identification of a new class of molecules, the arachidonoyl amino acids, and characterization of one member that inhibits pain. *J. Biol. Chem.* **276**(46), 42639-42644 (2001).
- Bezuglov, V., Bobrov, M., Gretskaya, N., *et al.* Synthesis and biological evaluation of novel amides of polyunsaturated fatty acids with dopamine. *Bioorg. Medicinal Chem. Letters* **11**, 447-449 (2001).
- O'Sullivan, S.E., Kendall, D.A., and Randall, M.D. Characterisation of the vasorelaxant properties of the novel endocannabinoid N-arachidonoyl-dopamine (NADA). *Br. J. Pharmacol.* **141**, 803-812 (2004).

Related Products

Arachidonoyl Serotonin - Item No. 70665 • Arachidonoyl Ethanolamide - Item No. 90050 • Arvanil - Item No. 90052 • AM404 - Item No. 90060 • Olvanil - Item No. 90262 • Oleoyl Ethanolamide - Item No. 90265 • Palmitoyl Ethanolamide - Item No. 90350

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.

WARRANTY AND LIMITATION OF REMEDY

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.**

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Copyright Cayman Chemical Company, 06/20/2011

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com