

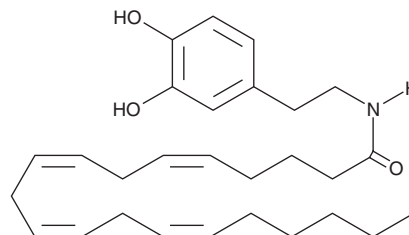
PRODUCT INFORMATION



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%
UV/Vis.: λ_{max}: 211, 284 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

N-Arachidonoyl dopamine 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. N-Arachidonoyl dopamine is miscible in these solvents.

N-Arachidonoyl dopamine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of N-arachidonoyl dopamine should be diluted with the aqueous buffer of choice. N-Arachidonoyl dopamine has a solubility of approximately 100 µg/ml (colloidal suspension) in a 1:1 solution of ethanol:PBS (pH 7.2) using this method.

Description

N-Arachidonoyl dopamine (NADA) is an arachidonoyl amino acid and cannabinoid (CB) receptor 1 agonist ($K_i = 250$ nM in rat brain membranes, which highly express CB₁ receptors).¹ It is selective for CB₁ over CB₂ receptors ($K_i = 12,000$ nM in rat spleen membranes, which highly express CB₂ receptors). NADA induces intracellular calcium mobilization in N18TG2 neuroblastoma cells ($EC_{50} = 0.7$ µM). It inhibits the proliferation of MCF-7 breast cancer cells ($IC_{50} = 0.25$ µM), an effect that can be reversed by the CB₁ receptor antagonist SR141716A (rimonabant; Item No. 9000484). NADA (10 mg/kg) induces hypothermia, catalepsy, hypolocomotion, and analgesia in mice.

Reference

1. Bisogno, T., Melck, D., Bobrov, M.Y., et al. N-acyl-dopamines: Novel synthetic CB₁ cannabinoid-receptor ligands and inhibitors of anandamide inactivation with cannabimimetic activity *in vitro* and *in vivo*. *Biochem. J.* **351**(Pt 3), 817-824 (2001).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/28/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM