

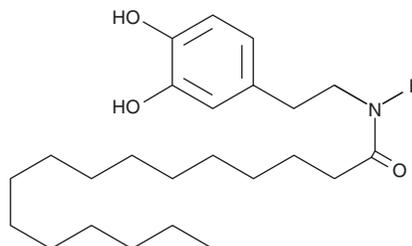
PRODUCT INFORMATION



N-Palmitoyl Dopamine

Item No. 10007697

CAS Registry No.: 136181-87-8
Formal Name: N-[2-(3,4-dihydroxyphenyl)ethyl]-hexadecanamide
Synonyms: PALDA
MF: C₂₄H₄₁NO₃
FW: 391.6
Purity: ≥98%
UV/Vis.: λ_{max}: 204, 283 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥1 year



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

Laboratory Procedures

N-Palmitoyl dopamine (PALDA), 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. The solubility of PALDA in these solvents is approximately 20 mg/ml.

Description

Several different fatty acyl dopamine analogs, such as N-arachidonoyl dopamine (NADA), N-oleoyl dopamine (ODA) and PALDA, have been isolated and characterized from bovine brain.^{1,2} Structurally, PALDA is the amide of palmitic acid and dopamine and is therefore a “hybrid” analog which incorporates components of both the anandamide-like and dopamine neurotransmitter pathways. Unlike NADA and ODA, PALDA is nearly inactive as a vanilloid receptor 1 (VR1) ligand and fails to elicit hyperalgesic or nocifensive responses in vivo.³ However, PALDA exhibits an “entourage” effect at concentrations of 0.1-10 μM by potentiating the VR1-mediated effects of NADA and anandamide.⁴

References

1. 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).
2. Chu, C.J., Huang, S.M., De Petrocellis, L., *et al.* N-oleoyldopamine, a novel endogenous capsaicin-like lipid that produces hyperalgesia. *J. Biol. Chem.* **278(16)**, 13633-13639 (2003).
3. De Petrocellis, L., Chu, C.J., Moriello, A.S., *et al.* Actions of two naturally occurring saturated N-acyldopamines on transient receptor potential vanilloid 1 (TRPV1) channels. *Br. J. Pharmacol.* **143(2)**, 251-256 (2004).

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, 03/06/2024

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