

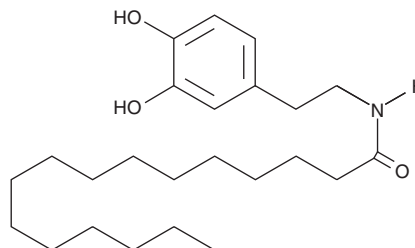
# PRODUCT INFORMATION



## N-Palmitoyl Dopamine

Item No. 10007697

**CAS Registry No.:** 136181-87-8  
**Formal Name:** N-[2-(3,4-dihydroxyphenyl)ethyl]-hexadecanamide  
**Synonym:** PALDA  
**MF:** C<sub>24</sub>H<sub>41</sub>NO<sub>3</sub>  
**FW:** 391.6  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 204, 283 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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 crystalline solid. A stock solution may be made by dissolving the PALDA in the solvent of choice, which should be purged with an inert gas. PALDA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. 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.<sup>1,2</sup> 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*.<sup>3</sup> However, PALDA exhibits an “entourage” effect at concentrations of 0.1-10 μM by potentiating the VR1-mediated effects of NADA and anandamide.<sup>4</sup>

### 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.

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