

Catalog # 10-1479

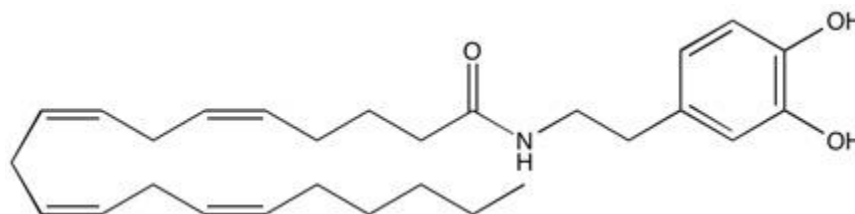
N-Arachidonyldopamine

CAS# 199875-69-9

N-(5Z,8Z,11Z,14Z-eicosatetraenoyl)dopamine

NADA; AA-DA

Lot # S105019



Endogenous conjugate of arachidonic acid and dopamine.¹ May be the “endogenous capsaicin like substance” in the CNS acting at TRPV1 channels, $EC_{50} \sim 50 \text{ nM}$ ¹. Also acts as a selective cannabinoid CB1 agonist ($K_i = 0.25$ and $15 \mu\text{M}$ for CB1 and CB2 respectively)² and results in a distinct signaling profile from any known cannabinoid³. Competitive inhibitor of FAAH and anandamide transport.⁴ Modulates acute systemic inflammation via non-hematopoietic TRPV1.⁵

- 1) Huang *et al.* (2002), *An endogenous capsaicin-like substance with high potency at recombinant and native vanilloid VR1 receptors*; Proc. Natl. Acad. Sci. USA, **99** 8400
- 2) Bisogno *et al.* (2000), *N-acyl-dopamines: novel synthetic CB(1) cannabinoid-receptor ligands and inhibitors of anandamide inactivation with cannabimimetic activity in vitro and in vivo*; Biochem. J., **351 Pt 3** 817
- 3) Redmund *et al.* (2016), *Identification of N-arachidonoyl dopamine as a highly biased ligand at cannabinoid CB1 receptors*; Br. J. Pharmacol., **173** 115
- 4) Petrocellis *et al.* (2000), *Overlap between the ligand recognition properties of the anandamide transporter and the VR1 vanilloid receptor: inhibitors of anandamide uptake with negligible capsaicin-like activity*; FEBS Lett., **483** 52
- 5) Lawton *et al.* (2017), *N-Arachidonoyl Dopamine Modulates Acute Systemic Inflammation via Nonhematopoietic TRPV1*; J. Immunol., **199** 1465

PHYSICAL DATA

Molecular Weight:	439.63
Molecular Formula:	$\text{C}_{28}\text{H}_{41}\text{NO}_3$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 50 mg/ml)
Physical Description:	Pale yellow viscous oil
Storage and Stability:	Store as supplied desiccated at -80°C for up to 3 years from the date of purchase. Solutions in DMSO may be stored at -80°C for up to 1 month.

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