Catalog # 10-1194

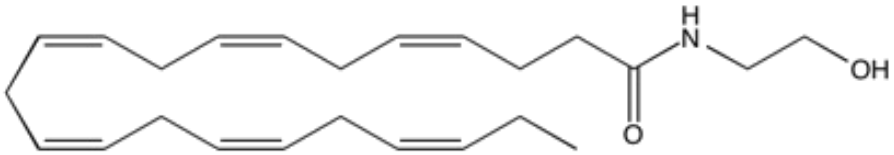
Synaptamide

CAS# 162758-94-3

N-Docosahexaenoylethanolamine

DHA-ethanolamide

Lot # S103182



Anandamide-like lipid mediator produced from DHA in the brain. Stimulates neurite growth, synaptogenesis and glutamatergic synaptic activity in developing hippocampal neurons at 10-100 nM.[1] Potently induces neuronal differentiation of neural stem cells.[2] Promotes growth of cortical axons vial modulation of hedgehog signaling.[3] Binds to and activates orphan receptor GPR110, stimulating cAMP production at low nM concentrations.[4] Reduces LPS-induced TNFα production in cultured microglia cells and ameliorates LPS-induced neuroinflammation in a mouse model.[5]

1) Kim and Spector (2013), *Synaptamide, endocannabinoid-like derivative of docosahexaenoic acid with cannabinoid-independent function*; Prostaglandins Leukot. Essent. Fatty Acids , **88** 121
2) Rashid *et al*. (2013), *SN-Docosahexaenoylethanolamide is a potent neurogenic factor for neural stem cell differentiation*; J. Neurochem., **125** 869
3) Kharebava *et al*. (2015), *N-docosahexaenoylethanolamine regulates Hedgehog signaling and promotes growth of cortical axons*; Biol. Open., **4** 1660
4) Lee *et al*. (2016), *Orphan GPR110 (ADGRF1) targeted by N-docosahexaenoylethanolamine in development of neurons and cognitive function*; Nat. Commun., **7** 13123
5) Park *et al*. (2016), *N-docosahexaenoylethanolamine ameliorates LPS-induced neuroinflammation via cAMP/PKA-dependent signaling;* J. Neuroinflammation, **13** 284

PHYSICAL DATA

Molecular Weight:	371.56
Molecular Formula:	$C_{24}H_{37}NO_2$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	Soluble in DMSO (up to 35 mg/ml)
Physical Description:	Pale-yellow oil
Storage and Stability:	Store as supplied, at -80°C for up to 1 year from the date of purchase.
	Solutions in DMSO may be stored at -80°C under inert gas for up to 3 months.

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