

Certificate of Analysis

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Product Name: Anandamide

Catalog No.: 1339

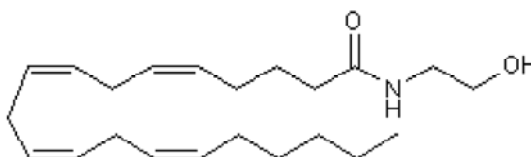
Batch No.: 18

CAS Number: 94421-68-8

IUPAC Name: *N*-(2-Hydroxyethyl)-5Z,8Z,11Z,14Z-eicosatetraenamide

1. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------------------|--|
| Batch Molecular Formula: | C ₂₂ H ₃₇ NO ₂ |
| Batch Molecular Weight: | 347.54 |
| Physical Appearance: | Clear oil |
| Solubility: | Soluble in ethanol (supplied pre-dissolved in anhydrous ethanol, 5mg/ml) |
| Storage: | Store at -20°C |
| Batch Molecular Structure: | |



2. ANALYTICAL DATA

| | |
|---------------------------|---------------------------|
| HPLC: | Shows 99.7% purity |
| ¹H NMR: | Consistent with structure |
| Mass Spectrum: | Consistent with structure |

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Endogenous cannabinoid and TRPV1 receptor agonist (K_i values are 89 and 371 nM at CB₁ and CB₂ receptors respectively; EC₅₀ values are 18, 31 and 27 nM at GPR55, CB₁ and CB₂ respectively; pK_i = 5.68 for rTRPV1). Also blocks TNF- α -induced NF- κ B activation via direct inhibition of IKK. Deuterated analog also available.

Physical and Chemical Properties:

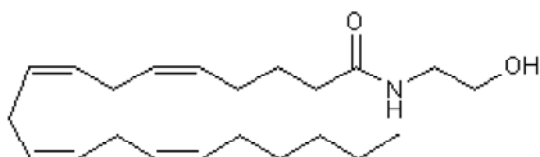
Batch Molecular Formula: C₂₂H₃₇NO₂

Batch Molecular Weight: 347.54

Physical Appearance: Clear oil

Minimum Purity: \geq 98%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

Soluble in ethanol (supplied pre-dissolved in anhydrous ethanol, 5mg/ml)

This product is supplied dissolved in anhydrous ethanol at a concentration of 5mg/ml

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Ryberg *et al* (2007) The orphan receptor GPR55 is a novel cannabinoid receptor. *Br.J.Pharmacol.* **152** 1092. PMID: 17876302.

Sancho *et al* (2003) Anandamide inhibits nuclear factor- κ B activation through a cannabinoid receptor-independent pathway. *Mol.Pharmacol.* **63** 429. PMID: 12527815.

Ross *et al* (2001) Structure-activity relationship for the endogenous cannabinoid, anandamide, and certain of its analogues at vanilloid receptors in transfected cells and vas deferens. *Br.J.Pharmacol.* **132** 631. PMID: 11159715.

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