

## Certificate of Analysis

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**Product Name:** Oleylethanolamide

**Catalog No.:** 1484

**Batch No.:** 4

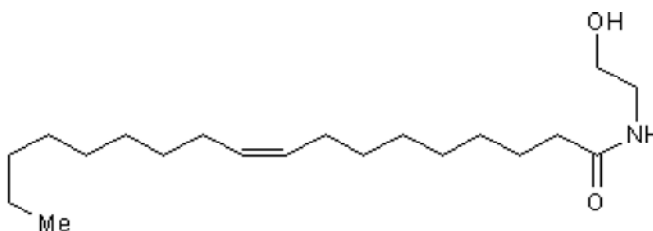
CAS Number: 111-58-0

EC Number: 203-884-8

IUPAC Name: (9Z)-N-(2-Hydroxyethyl)-9-octadecenamide

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>20</sub>H<sub>39</sub>NO<sub>2</sub>  
**Batch Molecular Weight:** 325.53  
**Physical Appearance:** White solid  
**Solubility:** ethanol to 100 mM  
 DMSO to 100 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.32 (Ethyl acetate)  
**Melting Point:** Between 62 - 64°C  
**HPLC:** Shows 99.1% purity  
<sup>1</sup>H NMR: Consistent with structure  
 Mass Spectrum: Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	73.79	12.08	4.3
Found	73.98	11.78	4.38

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

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IUPAC Name: (9Z)-N-(2-Hydroxyethyl)-9-octadecenamide

**Description:**

Lipid mediator and analog of anandamide (Cat. No. 1339) that is involved in peripheral regulation of feeding. Selective GPR55 agonist (EC<sub>50</sub> values are 0.44, >30 and >30 μM at GPR55, CB<sub>1</sub> and CB<sub>2</sub> respectively) and PPARα agonist (EC<sub>50</sub> = 120 nM). Induces satiety through activation of PPARα and is also a ceramidase inhibitor. Also endogenous agonist at the GPR119 receptor.

**Physical and Chemical Properties:**

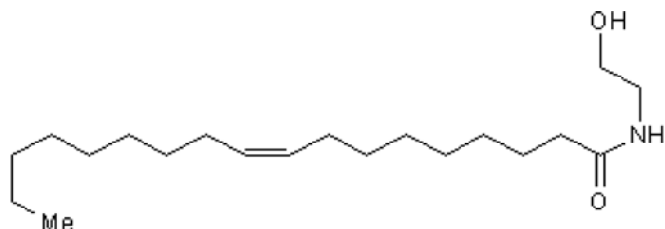
Batch Molecular Formula: C<sub>20</sub>H<sub>39</sub>NO<sub>2</sub>

Batch Molecular Weight: 325.53

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

ethanol to 100 mM

DMSO to 100 mM

**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.

**Fu et al** (2003) Oleylethanolamide regulates feeding and body weight through activation of the nuclear receptor PPAR-α. *Nature* **425** 90. PMID: 12955147.

**Calignano et al** (2001) Antinociceptive activity of the endogenous fatty acid amide, palmitylethanolamide. *Eur.J.Pharmacol.* **419** 191. PMID: 11426841.

**de Fonseca et al** (2001) An anorexic lipid mediator regulated by feeding. *Nature* **414** 209. PMID: 11700558.

**Coroneos et al** (1995) Differential regulation of sphingomyelinase and ceramidase activities by growth factors and cytokines. *J.Biol.Chem.* **270** 23305. PMID: 7559485.

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