

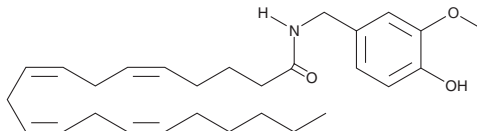
Product Information



Arvanil

Catalog No. 90052

CAS Registry No.: 128007-31-8
Formal Name: N-[(4-hydroxy-3-methoxyphenyl)methyl-5Z,8Z,11Z,14Z-eicosatetraenamide
Synonym: N-Vanillylarachidonamide
MF: C₂₈H₄₁NO₃
FW: 439.6
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol
UV/Vis.: λ_{max}: 229, 281 nm



Laboratory Procedures

For long term storage, we suggest that arvanil be stored as supplied at -20°C. It will be stable for at least one year.

Arvanil is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of arvanil in these solvents is at least 13 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of arvanil is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. For maximum aqueous solubility, arvanil can be directly dissolved in 0.1 M Na₂CO₃ (1 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. We do not recommend storing the aqueous solution for more than one day.

Arvanil is a structural analog of capsaicin, which is the noxious, active component of hot peppers of the *Capsicum* family. Arvanil is the amide of vanillylamine and arachidonic acid. Arvanil induces analgesia in rat and mouse models of pain.¹ It has complex interactions with the cannabinoid system, in that it potentiates the agonist activity of endogenous cannabinoids by inhibiting the reuptake of arachidonylethanolamide (AEA). It is an agonist at CB₁ but not CB₂ receptors, and is able to inhibit rat brain FAAH.³ The vasodilator, analgesic, and anti-inflammatory properties of arvanil are not clearly explained by its interactions with cannabinoid and vanilloid receptors, suggesting other possible sites of action.

References

1. Di Marzo, V., Bisogno, T., Melck, D., *et al.* Interactions between synthetic vanilloids and the endogenous cannabinoid system. *FEBS Lett.* **436**, 449-454 (1998).
2. Janusz, J.M., Buckwalter, B.L., Young, P.A., *et al.* Vanilloids. 1. Analogs of capsaicin with antinociceptive and antiinflammatory activity. *J. Med. Chem.* **36**, 2595-2604 (1993).
3. Glaser, S.T., Abumrad, N.A., Fatade, F., *et al.* Evidence against the presence of an anandamide transporter. *Proc. Natl. Acad. Sci. USA* **100**(7), 4269-4274 (2003).

Related Products

Arachidonylethanolamide - Cat. No. 90050 • Fluoromethanandamide - Cat. No. 90055 • Arachidonylethanolamine - Cat. No. 90057 • Olvanil - Cat. No. 90262

WARNING: THIS PRODUCT IS NOT FOR HUMAN OR ANIMAL DISEASE DIAGNOSIS OR THERAPEUTIC DRUG USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery.**

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com