

PRODUCT INFORMATION



Arvanil

Item 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

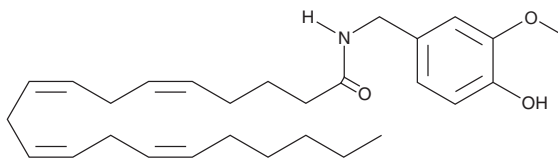
Purity: ≥98%

UV/Vis.: λ_{max}: 229, 281 nm

Supplied as: A solution in ethanol

Storage: -20°C

Stability: As supplied, 1 year from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

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.

Description

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 arachidonyl ethanolamide (AEA). It is an agonist at CB₁ (K_i values of 0.25 to 0.52 μM), 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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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