

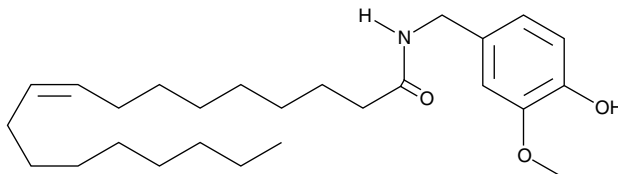
# Product Information



## Olvanil

Item No. 90262

**CAS Registry No.:** 58493-49-5  
**Formal Name:** N-[(4-hydroxy-3-methoxyphenyl)methyl]-9Z-octadecenamide  
**Synonyms:** NE 19550; N-Vanillyloleamide  
**MF:** C<sub>26</sub>H<sub>43</sub>NO<sub>3</sub>  
**FW:** 417.6  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in ethanol  
**UV/Vis.:** λ<sub>max</sub>: 229, 281 nm



### Laboratory Procedures

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

Olvanil 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 olvanil in these solvents is approximately 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 olvanil is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. For greater aqueous solubility, olvanil can be directly dissolved in 0.1 M Na<sub>2</sub>CO<sub>3</sub> (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.

Olvanil is a structural analog of capsaicin, which is the noxious active component of hot peppers of the *Capsicum* genus. It is the amide of vanillylamine and oleic acid. Olvanil acts as an agonist at the vanilloid receptor, VR<sub>1</sub>, inducing desensitization analgesia in rat and mouse models of pain.<sup>1</sup> Olvanil has complex interactions with the cannabinoid system, in that it potentiates the agonist activity of endogenous cannabinoids by inhibiting the reuptake of arachidonyl ethanolamide. Olvanil is a more potent reuptake inhibitor than AM404, which is commonly used for this purpose (50% inhibition of reuptake at 10 μM versus 12% for AM404 at the same dose).<sup>2</sup> Olvanil is also a CB<sub>1</sub> agonist, but does not bind to CB<sub>2</sub> receptors. The IC<sub>50</sub> for FAAH is 20 μM. The overall activity of olvanil in most models is that of an analgesic, but it is unclear how these effects are mediated by VR<sub>1</sub>, the CB<sub>1</sub> receptor, or other components of the endogenous pain sensation system.

### References

1. 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).
2. Di Marzo, V., Bisogno, T., Melck, D., *et al.* Interactions between synthetic vanilloids and the endogenous cannabinoid system. *FEBS Lett.* **436**, 449-454 (1998).
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

Arvanil - Item No. 90052 • Arachidonoyl Dopamine - Item No. 90057 • Oleic Acid - Item No. 90260 • Oleoyl Ethanolamide - Item No. 90265

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC 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 *via* email to your institution.

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