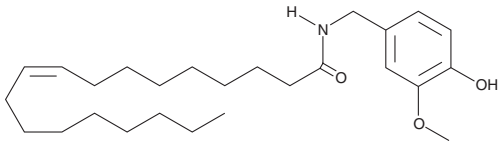
PRODUCT INFORMATION

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:	$C_{26}H_{43}NO_3$
FW:	417.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 229, 281 nm
Supplied as:	A solution in ethanol
Storage:	-20°C
Stability:	≥1 year



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

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_2CO_3 (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

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_1, inducing desensitization analgesia in rat and mouse models of pain.[1] 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).[2] Olvanil is also a CB_1 agonist, but does not bind to CB_2 receptors. The IC_{50} 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_1, the CB_1 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).

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