

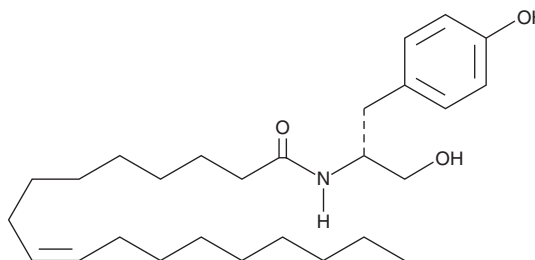
PRODUCT INFORMATION



OMDM-2

Item No. 10179

CAS Registry No.: 616884-63-0
Formal Name: (R)-N-(1-(4-hydroxyphenyl)-2-hydroxyethyl)oleamide
Synonym: (R)-N-oleoyl Tyrosinol
MF: C₂₇H₄₅NO₃
FW: 431.7
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 225, 279 nm



Laboratory Procedures

For long term storage, we suggest that OMDM-2 be stored as supplied at -20°C. It should be stable for at least two years.

OMDM-2 is supplied as a crystalline solid. A stock solution may be made by dissolving the OMDM-2 in an organic solvent purged with an inert gas. OMDM-2 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of OMDM-2 in these solvents is approximately 30 mg/ml.

OMDM-2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, OMDM-2 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. OMDM-2 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Numerous analogs of arachidonoyl ethanolamide¹ (AEA, anandamide; Item No. 90050) potentiate its biological activity. This potentiation is ascribed either to inhibition of AEA reuptake into neurons or inhibition of fatty acid amide hydrolase (FAAH) within the neurons.² OMDM-2 is an endocannabinoid analog specifically designed to be a potent and selective inhibitor of the cellular uptake of AEA.³ It is a weak inhibitor of FAAH activity in rat brain homogenate and exhibits moderate inhibitory effects upon AEA uptake in C6 glioma and RBL-2H3 cells.⁴ Structurally, OMDM-2 is the amide of (S)-tyrosinol with oleic acid. In RBL-2H3 cells, OMDM-2 inhibits the cellular uptake of tritiated AEA with an IC₅₀ of 3 μM, with negligible effects on the CB₁ receptor and VR₁.³

References

1. Khanolkar, A.D. and Makriyannis, A. Structure-activity relationships of anandamide, an endogenous cannabinoid ligand. *Life Sci.* **65**, 607-616 (1999).
2. Deutsch, D.G., Glaser, S.T., Howell, J.M., *et al.* The cellular uptake of anandamide is coupled to its breakdown by fatty-acid amide hydrolase. *J. Biol. Chem.* **276**(10), 6967-6973 (2001).
3. Ortar, G., Ligresti, A., De Petrocellis, L., *et al.* Novel selective and metabolically stable inhibitors of anandamide cellular uptake. *Biochem. Pharmacol.* **65**, 1473-1481 (2003).
4. Fowler, C.J., Tiger, G., Ligresti, A., *et al.* Selective inhibition of anandamide cellular uptake versus enzymatic hydrolysis - a difficult issue to handle. *Eur. J. Pharmacol.* **492**, 1-11 (2004).

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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