# PRODUCT INFORMATION

## OMDM-2

*Item No. 10179*

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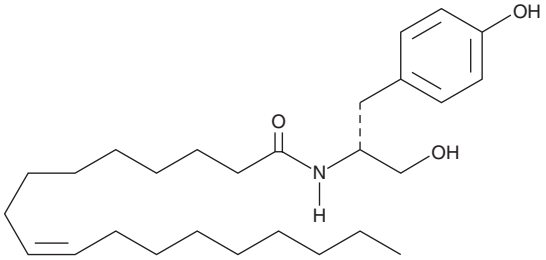
|---|---|
| **CAS Registry No.:** | 616884-63-0 |
| **Formal Name:** | (R)-N-(1-(4-hydroxyphenyl)-2-hydroxyethyl)oleamide |
| **Synonym:** | (R)-N-oleoyl Tyrosinol |
| **MF:** | $C_{27}H_{45}NO_3$ |
| **FW:** | 431.7 |
| **Purity:** | ≥98% |
| **Stability:** | ≥2 years at-20°C |
| **Supplied as:** | A crystalline solid |
| **UV/Vis.:** | $\lambda_{max}$: 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-1 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 ethanolamide[1] (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 $IC_{50}$ of 3 µM, with negligible effects on the $CB_1$ receptor and $VR_1$.[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).





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