

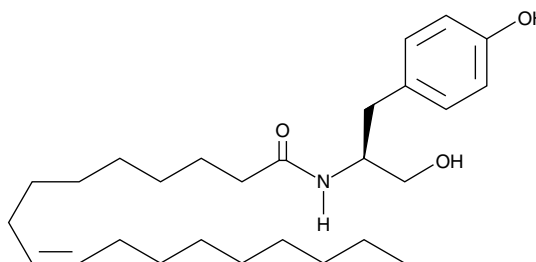
# Product Information



## OMDM-1

Item No. 10171

<b>Formal Name:</b>	(S)-N-(1-(4-hydroxyphenyl)-2-hydroxyethyl)oleamide
<b>Synonym:</b>	(S)-N-oleoyl Tyrosinol
<b>MF:</b>	C <sub>27</sub> H <sub>45</sub> NO <sub>3</sub>
<b>FW:</b>	431.7
<b>Purity:</b>	≥98%
<b>Stability:</b>	≥2 years at -20°C
<b>Supplied as:</b>	A crystalline solid
<b>UV/Vis.:</b>	λ <sub>max</sub> : 225, 279 nm



### Laboratory Procedures

For long term storage, we suggest that OMDM-1 be stored as supplied at -20°C. It should be stable for at least two years.

OMDM-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the OMDM-1 in an organic solvent purged with an inert gas. OMDM-1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of OMDM-1 in these solvents is approximately 30 mg/ml.

OMDM-1 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-1 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.

Numerous analogs of arachidonoyl ethanolamide<sup>1</sup> (AEA, anandamide) 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.<sup>2</sup> OMDM-1 is an endocannabinoid analog specifically designed to be a potent and selective inhibitor of the cellular uptake of AEA.<sup>3</sup> 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.<sup>4</sup> Structurally, OMDM-1 is the amide of (R)-tyrosinol with oleic acid. In RBL-2H3 cells, OMDM-1 inhibits the cellular uptake of tritiated AEA with an IC<sub>50</sub> of 2.4 μM, with negligible effects on the CB<sub>1</sub> receptor and VR<sub>1</sub>.<sup>3</sup>

### 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).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10171](http://www.caymanchem.com/catalog/10171)

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**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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