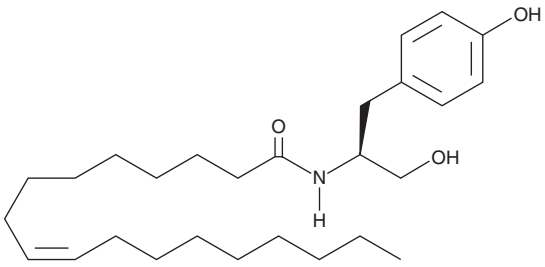
PRODUCT INFORMATION

OMDM-1

Item No. 10171

CAS Registry No.:	616884-62-9
Formal Name:	(S)-N-(1-(4-hydroxyphenyl)-2-hydroxyethyl)oleamide
Synonym:	(S)-N-oleoyl Tyrosinol
MF:	$C_{27}H_{45}NO_3$
FW:	431.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 225, 279 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

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

OMDM-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, OMDM-1 should first be dissolved in DMSO 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 DMSO: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 (AEA, anandamide; Item No. 90050) potentiate its biological activity.[1] 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-1 is an endocannabinoid analog specifically designed to be a potent and selective inhibitor of the cellular uptake of AEA.[3] Structurally, OMDM-1 is the amide of (S)-tyrosinol with oleic acid (Item No. 90260). In RBL-2H3 cells, OMDM-1 inhibits the cellular uptake of tritiated AEA with an IC_{50} of 2.4 µM, with negligible effects on the CB_1 receptor and VR1.[3]

References

1. Khanolkar, A.D. and Makriyannis, A. Structure-activity relationships of anandamide, an endogenous cannabinoid ligand. *Life Sci.* **65(6-7)**, 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(9)**, 1473-1481 (2003).

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