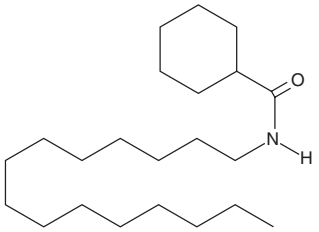
PRODUCT INFORMATION

N-Cyclohexanecarbonylpentadecylamine

Item No. 10007739

CAS Registry No.:	702638-84-4
Formal Name:	N-pentadecyl-cyclohexanecarboxamide
MF:	$C_{22}H_{43}NO$
FW:	337.6
Purity:	≥98%
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

N-Cyclohexanecarbonylpentadecylamine is supplied as a crystalline solid. A stock solution may be made by dissolving the N-cyclohexanecarbonylpentadecylamine in the solvent of choice, which should be purged with an inert gas. N-Cyclohexanecarbonylpentadecylamine is soluble in the organic solvent ethanol at a concentration of approximately 2 mg/ml.

Description

Numerous analogs of fatty acyl ethanolamides potentiate the intrinsic biological activity of endocannabinoids.[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] However, Ueda, *et al.*, have recently cloned another amidase, the acidic palmitoyl ethanolamidase (PEAase), that promotes the hydrolysis of PEA.[3] N-cyclohexanecarbonylpentadecylamine is a selective inhibitor of acidic PEAase, inhibiting the enzyme with an IC_{50} of 4.5 µM, while failing to inhibit FAAH even at 100 µM.[4]

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. Ueda, N., Yamanaka, K., and Yamamoto, S. Purification and characterization of an acid amidase selective for N-palmitoylethanolamine, a putative endogenous anti-inflammatory substance. *J. Biol. Chem.* **276(38)**, 35552-35557 (2001).
4. Tsuboi, K., Hilligsmann, C., Vandevoorde, S., *et al.* N-cyclohexanecarbonylpentadecylamine: A selective inhibitor of the acid amidase hydrolysing N-acylethanolamines, as a tool to distinguish acid amidase from fatty acid amide hydrolase. *Biochem J.* **379**, 99-106 (2004).

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